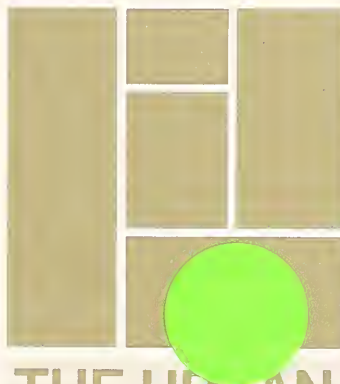


3973-02

(Revised) August 1991

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PHYSICIAN SERVICES:
RESULTS AND IMPLICATIONS**

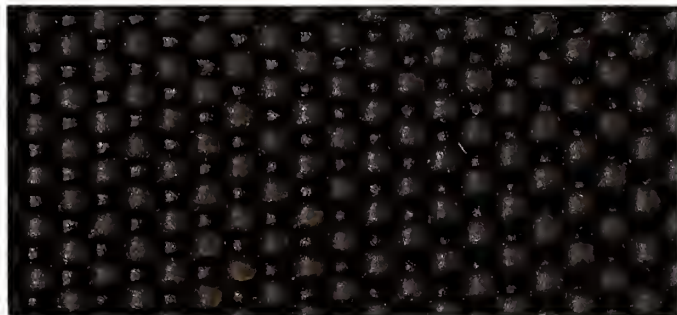
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Project Report



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Support for this research was provided by Health Care Financing Administration (HCFA) Cooperative Agreement No. 99-C-98526/1-06 to the Brandeis University Health Policy Research Consortium. The Cooperative Agreement supported a number of research papers and memorandum. The total budget for this project was \$75,996 and represented the sole source of funding. Any opinions expressed are those of the authors and do not represent the views of HCFA, The Urban Institute, or its sponsors. The authors wish to acknowledge the excellent programming assistance of Thy Dao and research assistance of Maria Perozek and Steve Norton.

TABLE OF CONTENTS

I. INTRODUCTION	1
II. DATA	3
III. UNDERLYING PATTERNS OF HOPD USE	5
Number of Visits	5
Physician Charges	6
Number of Providers	8
Number of Services	9
IV. FREQUENTLY PROVIDED SERVICES BY MEDICARE STATUS	10
V. FREQUENTLY PROVIDED SERVICES BY REASON FOR VISIT	11
Surgical/Non-surgical Visit	11
Routine Testing	12
VI. CONCLUSIONS	15
VII. POLICY IMPLICATIONS	18
REFERENCES	20

LIST OF TABLES

- Table 1. Distribution of Beneficiaries by HOPD Visit Category, CY 1987.
- Table 1a. Distribution of Beneficiaries by HOPD Visit Category: Aged, Disabled, and ESRD.
- Table 2. BMAD Allowed Charges by HOPD Visit Category, CY 1987.
- Table 2a. BMAD Allowed Charges by HOPD Visit Category: Aged, Disabled, and ESRD Beneficiaries.
- Table 3. Average Number of Providers and Services by HOPD Visit Category.
- Table 3a. Average Number of Providers and Services by HOPD Visit Category: Aged, Disabled, and ESRD.
- Table 4. Rank of Top Twenty Physician Services, Provided to Aged Beneficiaries, by Visit Category.
- Table 5. Rank of Top Twenty Physician Services, Provided to Disabled Beneficiaries, by Visit Category.
- Table 6. Rank of Top Twenty Physician Services, Provided to ESRD Beneficiaries, by Visit Category.
- Table 7. 25 Most Frequently Provided Physician Services, Surgical Visit.
- Table 8. 25 Most Frequently Provided Physician Services, Non-Surgical Visit.
- Table 9. Distribution of Physician Services and Charges by HCPCS Code for Selected HOPD Medical Visits, 1987.
- Table 10. Distribution of Physician Services and Charges by HCPCS Code for Selected Emergency Room HOPD Visits, 1987.
- Table 11. Percentage of HOPD Visits Including Selected High Volume Tests, 1987.
- Table 12. Percentage of Medical Visits with Selected High Volume Tests by Beneficiary Type and Hospital Type, 1987.
- Table 13. Percentage of Emergency Room Visits with Selected High Volume Tests by Beneficiary Type and Hospital Type, 1987.

LIST OF FIGURES

- Figure 1. Beneficiaries and Charges by Medicare Status.
- Figure 2. Average Charge per Beneficiary and Visit.
- Figure 3. Average Number of Providers per Beneficiary and Visit.
- Figure 4. Average Number of Services per Beneficiary and Visit.

I. INTRODUCTION

Between 1982 and 1987 Medicare physician expenditures doubled from \$11 billion to \$24 billion. Physician spending is presently growing at more than 13 percent annually. Even after adjusting for growth in numbers of beneficiaries and prices, physician spending grows at an annual rate of about 7 percent. Increases in physician expenditures over and above the growth in enrollees and prices is generally attributed to increases in service volume and intensity. In response to the rapid increase in physician expenditures, Congress legislated a three-part reform of Medicare physician reimbursement as part of the Omnibus Reconciliation Act of 1989. One part of that reform is a volume performance standard that links physicians' future fee increases to containing growth in expenditures attributed to volume and intensity.

Separately, Congress has mandated the development of a Medicare prospective payment system (PPS) for hospital outpatient department (HOPD) services—that is, the facility cost of such services. Like Medicare's inpatient PPS, the system will be designed to place payments to HOPDs on a more rational basis and provide incentives to contain costs. The systems under consideration classify patient encounters into payment groups on the basis of patient characteristics (e.g., age, sex), purpose of visit (e.g., prenatal check-up), procedure, and diagnosis.

In 1987, outpatient physician expenditures accounted for 26 percent of physician expenditures in the hospital setting and 15 percent of total physician spending. The Medicare physician reform and HOPD PPS initiatives present an opportunity to structure physician incentives to control service volume. More precisely, one could develop bundles of physician services

related to HOPD care. Bundling physician services would create incentives to provide efficient care by reducing the opportunities for volume and intensity growth. The purpose of this paper is to explore patterns of HOPD physician services and to discuss the implications for bundling HOPD physician services.

Conceptually, bundling can be quite complex. Services can be bundled across settings, for example, a single payment could be made for surgery provided in an HOPD and all follow-up visits in the physician's office. Separate but related services can be bundled together, for example, a single payment to the physician for the surgical procedure and related ancillary tests provided during an HOPD visit. Services can be bundled across time, for example, a single payment to the physician for a single service provided repetitiously at different points in time or all services within a given time period (e.g., capitation). Services can be bundled across component by, for example, making a single payment for both facility and physician costs of a given service.

A simpler way to think of bundling is as a continuum with billing for services "a la carte" at one end and total capitation at the other. For the purposes of this paper, bundling is defined as an aggregation of services such that the physician is no longer allowed to bill separately for certain services. This paper considers primarily bundling across services (during a single visit to the HOPD) and across time.

There are three broad research questions. First, what are the underlying patterns of HOPD use among Medicare beneficiaries (e.g., average number of visits, charge per visit, providers seen per visit, composition of service during visit)? Second, does the nature of physician services change as one moves from few visits to many visits? Third, do these patterns lend themselves to bundling?

We examine overall patterns of HOPD service use by Medicare beneficiaries. However, there is reason to believe that different beneficiary groups have different HOPD experiences. For example, End Stage Renal Disease (ESRD) beneficiaries qualify for Medicare on the basis of having a specific chronic condition that dictates, in large part, their health care experience. Thus, the pattern of HOPD physician services will be examined separately by reason for Medicare eligibility. Furthermore, there may be differences in the nature of physician services provided depending on the reason for the HOPD visit (i.e., irrespective of the type of beneficiary). One might want to take these differences into consideration when designing policies to control physician spending in the HOPD.

II. DATA

The data used for this analysis is the product of linking two CY 1987 five percent beneficiary sample files: the hospital outpatient file (HOP) and the Part B Medicare Annual Data (BMAD) file. Note that the HOP file includes a 5 percent sample of ESRD beneficiaries, whereas the BMAD file includes a 100 percent sample of ESRD beneficiaries. The analysis file contains 1.3 million HOP facility claims linked to 2.3 million BMAD line items for 545,000 beneficiaries. HOP claims and BMAD line items are linked on the basis of beneficiary identification number and date of service.¹ Thus the analysis that

-
1. The beneficiary is identified using the Health Insurance Claim (HIC) number. The date of service is the Through Date for both the HOP Claim and the BMAD line item. The agreement between From and Through Date on the HOP file is quite high (about 95 percent). The agreement between the From and Through Date on BMAD is high (about 85 percent). The matching was accomplished in three successive steps: date of service, date of service plus or minus one day, and date of service plus or minus two days. Thus, a BMAD line item

follows examines physician services provided on the day of the visit in the HOPD.²

In summary, HOP facility claims are linked with physician bills based on beneficiary ID and date of service. If an HOP claim has no associated physician bill it is not included in the analysis. Two examples of an HOP claim without an associated physician bill are laboratory tests that the physician cannot bill for separately, and claims where the physician service is provided by an intern or resident in a teaching hospital. In both instances, a physician (BMAD) bill is not generated. Since the objective of this analysis is to examine physician services in the HOPD, it is appropriate to exclude HOP facility claims that cannot have associated physician charges. In total there are 1.9 million HOP claims, as noted above, 1.3 million are included in this analysis.

Figure 1 reports the percentage of beneficiaries and allowed charges accounted for by the three beneficiary groups.³ Ninety percent of

could match with an HOP claim within one or two days of the HOP Through Date. This small window around the Through Date was allowed because there is evidence that BMAD dates of service are misreported. West, McMenamin, and Marcus (1986) found that when these errors occur, they are most often within one or two days.

The HOP claim defines the date of service. For a given date of an HOPD visit, more than one physician service can be received. Physicians are required to submit separate bills (referred to as line items) for each different service provided to a patient on a given date of service.

2. Since the analysis is based on the hospital outpatient (HOP) file, beneficiaries have at least one visit to the HOPD. The word "visit" in this context refers to any "encounter" in the HOPD. That is, for any given beneficiary, each HOP claim with a different date of service counts as a separate visit. During a visit to the HOPD, a beneficiary can receive more than one physician service. In order to avoid any semantic confusion, the reader should note that the CPT-4 coding scheme includes codes for "visit" services (e.g., 90505 brief emergency room visit, new patient).
3. The HOP file reports five Medicare status categories: aged without ESRD, aged with ESRD, disabled without ESRD, disabled with ESRD, and ESRD only. For

beneficiaries making HOPD visits are aged and they account for 90 percent of allowed physician charges associated with HOPD visits. Disabled beneficiaries account for 9 percent of beneficiaries but only 6 percent of charges. ESRD beneficiaries are relatively more expensive accounting for 4 percent of charges with only 1 percent of beneficiaries.⁴

III. UNDERLYING PATTERNS OF HOPD USE

Beneficiaries were organized into visit categories based on the number of visits made to the HOPD during CY 1987. The assumption is that the number of visits serves as a proxy for the patient's condition which dictates the type of physician services the beneficiary receives in the HOPD. Beneficiaries are also classified according to whether they qualified for Medicare on the basis of being aged, disabled or ESRD. As noted, we hypothesize that different types of Medicare beneficiaries will exhibit different patterns of service use.

Number of Visits. Table 1 reports the number and percentage of beneficiaries by visit category. The average Medicare beneficiary (who visited the HOPD) made 2.3 visits in 1987. The distribution of beneficiaries is highly

this analysis, these five categories were collapsed to three categories: aged, disabled, and ESRD. Beneficiaries who are aged with ESRD and disabled with ESRD are classified as ESRD. Previous analysis (Miller and Sulvetta 1990) indicates that beneficiaries who are aged with ESRD, disabled with ESRD, and ESRD only have similar HOPD facility charges that are significantly higher than those who are aged or disabled only. This suggests that the ESRD condition distinguished these beneficiaries and that collapsing these categories is appropriate. There were 1,000 beneficiaries (.2 percent) for which both aged and disabled designations were found. These claims were all classified as aged on the assumption that beneficiaries who initially qualify as disabled are classified as aged upon turning 65.

4. In addition to hospital outpatient department claims, the HOP file contains claims from freestanding dialysis facilities.

concentrated — the overwhelming majority of beneficiaries (84 percent) had three visits or less. Fifty-one percent of beneficiaries had one visit, 22.1 percent had two visits, 11 percent had three visits, 5.8 percent had four visits, and 3.4 percent had five visits. The remaining 6.7 percent had six or more visits.

Table 1a reports the number and percentage of visits by beneficiary type and by visit category. As might be expected, the distribution of aged beneficiaries by visit category mirrors the distribution for the Medicare beneficiary population as a whole: The average aged beneficiary made 2.2 visits to the HOPD in 1987 and 85 percent of the aged beneficiaries made 3 visits or less. In contrast, the average disabled beneficiary made 2.7 visits. Although this distribution is also highly concentrated, it is less so than that for the aged—79 percent of disabled beneficiaries make three visits or less. The visit pattern for ESRD beneficiaries is much more dispersed across the visit categories. The average ESRD beneficiary made 7.3 visits to the HOPD in 1987. Just over 30 percent of ESRD beneficiaries made three visits or less to the HOPD. It is important to note that it appears that the facility submits a single claim for multiple dialysis treatments provided during the month. This understates the number of visits made to the HOPD by ESRD beneficiaries because the number of visits made is based on the number of HOP claims with unique dates of service. For this reason all charge and utilization statistics discussed below are reported on both a per beneficiary and per visit basis.

Physician Charges. Table 2 presents BMAD allowed charges by visit category. The distribution of charges is not as highly concentrated as the distribution of beneficiary visits. About 66 percent of allowed charges are accounted for by beneficiaries with three visits or less. Eighty-one percent of charges are accounted for by beneficiaries with five visits or less. The

average allowed charge per beneficiary increases with the number of visits: \$158 for one visit; \$504 for five visits; \$861 for 10 visits; \$1,276 for 15 visits; and \$1,697 for 21+ visits. The average allowed charge per visit falls as the number of visits increase during the year. For example, the average charge per visit for beneficiaries with one visit is \$158 whereas the average charge per visit for beneficiaries with 21+ visits is \$59.

Table 2a presents BMAD allowed charges by beneficiary group and by visit category. For all three beneficiary groups, the distribution of charges across the visit categories is less concentrated than the distribution of beneficiary visits. However, charges for the aged are most highly concentrated in visit categories 1-3, while charges for ESRD beneficiaries are more disbursed across all visit categories.

Table 2a also reports average allowed charges per beneficiary and per visit. Both are reported because, as noted above, a visit based measure is likely to be distorted for ESRD beneficiaries because of dialysis claims. Average charge per visit is highest for ESRD beneficiaries (\$153), followed by the aged (\$126), and lowest for disabled beneficiaries (\$76). The average charge per beneficiary is dramatically higher for ESRD beneficiaries (\$1,120) as compared to aged (\$276) and disabled (\$203) beneficiaries.

In Figure 2, the average charge per visit for aged and disabled beneficiaries tends to fall as the number of visits increase. This is most pronounced for aged beneficiaries where the average charge for those making one visit is \$163, \$102 for those making five visits, \$80 for those making 10 visits, and so on. In contrast, the average charge per visit for ESRD beneficiaries remains fairly stable across all visit categories (e.g., \$140 for one visit; \$163 for five visits; \$161 for 10 visits). Also in Figure 2, the average charge per beneficiary increases more slowly as aged and disabled

beneficiaries accumulate visits because the average charge per visit is falling. For ESRD beneficiaries, average charges per beneficiary increase rapidly across the visit categories because the average charge per visit remains stable and these beneficiaries make more visits.

Number of Providers. Table 3 reports the average number of different physicians seen by beneficiaries in the HOPD during the year. For each beneficiary, the number of different physicians (as indicated by unique provider ID) were counted.⁵ There are two well know limitations when using provider IDs (UPINS were implemented in 1989 to correct these problems). First, a provider ID can refer to a physician group as well as an individual physician. Second, a given physician can have several IDs, perhaps for different offices. The first error would have the effect of understating the number of different physicians seen by the beneficiary during the year. This is a limitation to the extent that physicians within a group practice are each treating the same patient. The second error would have the effect of overstating the number of different physicians seen by the beneficiary. Assuming the physician tends to see a beneficiary in the same HOPD each visit, it seems unlikely that a physician would frequently change provider IDs when billing for the same patient. We do not expect this second type of error to significantly affect our results.

The average Medicare beneficiary sees 2.3 different physicians in the HOPD during the year. As might be expected, the number of providers seen per

5. A physician provider ID is included on each BMAD line item. Thus, for example, if a beneficiary received two physician services on a given date of service in the HOPD and these services were provided by two different physicians (as indicated by provider ID), that beneficiary would have seen two different physicians during the visit. One can see that in many situations this could easily occur. For example, on the day of an HOPD surgery visit there may be a bill from the surgeon and the anesthesiologist.

beneficiary increases as the number of visits increase. However, the pattern of increase indicates that beneficiaries who make multiple HOPD visits are more often seeing the same provider. For example, beneficiaries with one visit see an average of 1.5 physicians whereas beneficiaries with 21+ visits see 7.8 physicians.

Table 3a reports the average number of different physicians seen by different beneficiary types. The average aged beneficiary sees 2.3 different physicians in the HOPD during the year while the average disabled beneficiary sees 2.5 different physicians. ESRD beneficiaries see an average of 4.6 different physicians during the course of a year. For each beneficiary type, the patterns of visits are similar to those observed for the Medicare beneficiary population as a whole — the number of different physicians seen per beneficiary increases as the number of visits increase but the number of different physicians seen per visit decreases as the number of visits increase (see Figure 3).

Number of Services. Table 3 also presents the average number of service units (per beneficiary and visit) by visit category.⁶ The average Medicare beneficiary receives about five service units in the HOPD annually. The number of service units per beneficiary increases with the number of visits from 2.3 for beneficiaries making one visit to 59.4 for those making 21+ visits. Number of services per visit, however, is relatively stable. The average number of services per visit is 2.25 — ranging from a low of 2.1 for beneficiaries making 21+ visits to a high of almost 3.0 for those making 13 visits.

6. The MTUS field on the BMAD bill indicates the number of services provided. In addition to services, the MTUS field will indicate other units, such as miles (for ambulance services) and minutes (for anesthesiology services). All units other than services (i.e., MTUS indicator field = 3) were converted to one service unit. For example, 50 minutes of anesthesia time were converted to one anesthesia service.

Table 3a also presents the average number of services (per beneficiary and visit) by visit category and beneficiary type. The average aged or disabled beneficiary receives about five services in the HOPD annually. In contrast, the average ESRD beneficiary receives about 34 services in the HOPD annually. As noted earlier, physicians receive a single monthly payment for dialysis services. In examining the units of service for dialysis claims, we found that most often one service unit for the month rather than the actual number of dialysis visits is reported. This would tend to understate the number of services for ESRD beneficiaries. In Figure 4, the number of services per beneficiary increases with the number of visits (although the increase is steepest for ESRD beneficiaries). The number of services per visit remains fairly stable across visit categories.

IV. FREQUENTLY PROVIDED SERVICES BY MEDICARE STATUS

We hypothesized above that the nature of physician services provided to the beneficiary may change as the number of visits increase. The argument being that the number of visits serves as a proxy for the patient health status. Tables 4-6 report, for each beneficiary type, the 20 most frequently provided services by visit category. The interpretation of these tables is as follows. Taking the second and third rows of Table 4 as an example, venipuncture (36415) is the tenth most frequently provided service for aged beneficiaries making one HOPD visit, the ninth most frequent for those making two visits, and so on. Cataract removal and lens insertion (66984) is the ninth most frequently provided service for beneficiaries making one visit to the HOPD, but the fourteenth most frequent for those making four visits.

Looking across these tables, a few observations can be made. Medical visit and emergency room visit services are frequently provided services to all beneficiary types, regardless of the number of visits made to the HOPD during the year. Similarly, routine diagnostic services frequently received by all beneficiary groups, regardless of the number of visits include: venipuncture, chest x-rays, mammographies, CAT scans, urinalysis, and ECGs. On the other hand, the nature of HOPD physician services appears to shift toward the maintenance of chronic conditions as the number of HOPD visits increases. This is true of all beneficiary types although the specific maintenance services received by those making multiple visits differ. Aged beneficiaries making multiple visits frequently receive oncology services (e.g., radiation therapy) while disabled beneficiaries generally receive psychotherapy and oncology services. ESRD beneficiaries making multiple visits do so for dialysis.

V. FREQUENTLY PROVIDED SERVICES BY REASON FOR VISIT

Surgical/Non-surgical Visit. The next step in the analysis examines physician HOPD services from a different perspective—reason for visit. The HOP claim (that is, the hospital facility bill) is used to define the nature of the visit as follows. First, each of the HOP claims is categorized as surgical or nonsurgical. An HOP claim is considered surgical if it contained valid ICD-9 surgical procedure codes within any of the three fields reserved for ICD-9 surgery codes or if it contained surgical CPT-4 codes in any of the twenty-eight revenue center trailers. All other HOP claims are considered non-surgical. All BMAD services linked to a given HOP claim are considered surgical or nonsurgical, depending on the type of HOP claim with which they are linked. Table 7 reports the number of services and allowed charges for the 25

most frequently provided physician services during HOPD surgical visits. Table 8 reports the same information for nonsurgical services.

Looking across Tables 7 and 8 we find that a number of frequently provided services are common to both surgical and nonsurgical claims. With respect to diagnostic services, routine chest x-rays, urology tests, and ECGs are physician services common to both types of claims. Medical visit services and emergency room visit services are also common to both types of claims. Frequently provided services unique to surgical claims include (as expected) cataract procedures, endoscopy procedures, and surgical pathology. Frequently provided services unique to nonsurgical claims include venipuncture, other radiology exams, mammographies, and dialysis.

Routine Testing. Certain routine diagnostic services (venipuncture, chest x-rays, mammography, urinalysis, and ECGs) are frequently provided in the HOPD, regardless of number of visits, beneficiary type, or reason for visit. One concern is that a routine battery of tests is provided to Medicare beneficiaries during HOPD visits. To explore this question, we first examined the distribution of physician services and charges associated with six selected routine and ER visits to see if these services are provided in conjunction with visit services. Table 9 reports the distribution of physician services and charges for the three routine visit codes most frequently reported in the HOPD: established patient brief, limited, and intermediate service.⁷

7. In Tables 9 and 10, only services accounting for at least 1 percent of charges are reported separately. Units of service are obtained from the MTUS indicator on the BMAD file. In reviewing Tables 9 and 10, the readers will note some anomalies. For example, routine visit claims that include charges for surgery and other visit charges. Anomalies of this type are inevitable in data systems of this magnitude. We note that these anomalies, when they occur, represent small percentages of services and charges.

The majority of the physician charge for these visits is accounted for by the visit service itself. For example, 67 percent of physician charges during an established patient limited service visit are for HCPCS coded service 90050, the visit service itself. Nearly 3 percent of charges are for routine chest x-rays (71020) and 2 percent are for ECGs (93000). This pattern is similar across all three routine visits: 64 to 69 percent of charges are for the visit service itself; 2 to 3 percent of charges are for routine x-rays; and about 2 to 2.5 percent of charges are for ECGs. Table 10 indicates a similar pattern for three high-volume ER visits. What is notable about these six selected visits is the small percentage of charges accounted for by those high volume testing services and the absence of the other high volume routine testing services. Mammography, venipuncture, and urinalysis individually account for less than 1 percent of charges in these visits.

Table 11 approaches the question of routine testing from a different perspective.⁸ Seven high-volume diagnostic services are identified: routine venipuncture (36415); CAT scan, head or brain (70450); one view chest x-ray (71010); two view chest x-ray (71020); bilateral mammography (76091); routine urinalysis (81000); routine ECG with interpretation and report (93000); and routine ECG, interpretation and report only (93010). For the entire range of routine visit codes (90000-90080) and the entire range of ER visit codes (90500-90580), Table 11 reports the percentage of visits that include these tests. Referring to the first line in the table—3.88 percent of physician bills for new patient, brief visits in the HOPD contain charges for

8. In reviewing Tables 11-13, bear in mind that percentages reported can be based on small absolute numbers of visits. In Tables 12-13 this issue has additional significance in that the number of visits can vary by hospital type.

venipuncture (36415). About 9 percent contain charges for a two view chest x-ray (71020).

About 13 percent of HOPD medical visits include physician charges for chest x-rays (combining the two categories); 10 percent include charges for ECGs (combining the two categories); about 7 percent include charges for urinalysis; and about 9 percent include charges for routine venipuncture. Not surprisingly, it is the extended and comprehensive service visits (90017, 90020, 90070, 90080) that include these diagnostic services more frequently. Thus, of physician bills for established patient, comprehensive visits (90080), about 27 percent include x-ray charges; about 38 percent include ECG charges; 23 percent include urinalysis charges, and 18 percent include venipuncture charges.

Table 11 also reports the same information for ER visit codes. Over 24 percent of HOPD ER visits include physician charges for chest x-rays; 21 percent include charges for ECGs; and less than 1 percent include charges for any of the other diagnostic services in question. Similar to the patterns observed for medical visits, it is the extended and comprehensive service visits (90517, 90520, 90570, 90580) that include x-ray and ECG services more frequently.

Table 12 reports the percentage of HOPD medical visits including the various diagnostic services by beneficiary type and hospital type. Disabled and ESRD beneficiaries are generally less likely than the aged to have these services as part of their HOPD visits. The sole exception is the higher proportion of routine urinalyses performed during routine visits by ESRD beneficiaries. Table 13 reports the percentage of ER visits, including these services by beneficiary type and hospital type. Again, disabled beneficiaries are less likely than the aged to have these services as part of their ER HOPD

visits. However, ER visits for ESRD beneficiaries are notably more likely to include CAT scan, x-ray, and ECG services. Neither Table 12 nor Table 13 indicates dramatic variations in the percentage of visits including these services by hospital type.

VI. CONCLUSIONS

There are a number of conclusions to draw from the data analysis. The distribution of visits per beneficiary is highly concentrated for those making visits to the HOPD. Of beneficiaries making visits, most (84 percent) make three HOPD visits or less annually, and about half (51 percent) make one visit; the average number of visits is 2.3. The distribution of charges is much less concentrated than the distribution of visits. About 66 percent of allowed charges are accounted for by beneficiaries making three visits or less. The average charge per visit is highest for the first HOPD visit (\$158) and tends to fall as the number of visits increase.

The average beneficiary making a visit to the HOPD sees two physicians during the year. The distribution of beneficiaries is highly concentrated -- most (84 percent) beneficiaries see three physicians or fewer. During the initial visits, the beneficiary tends to see a different physician each visit. The likelihood of seeing the same physician increases as the number of visits increase. Between the first and fourth visit, beneficiaries see different physicians each visit. Starting at the fifth visit, the beneficiary is more likely to see the same physician. The average beneficiary who visits the HOPD, receives about five units of service annually. The more visits made, the more units of service per beneficiary. The number of services per visit, however, remains fairly stable around 2.3.

Analysis of the data by beneficiary group also yields some interesting results. First, regarding visit, charge, and utilization patterns, the aged and disabled appear to have relatively similar experiences (although there are some notable differences) while ESRD beneficiaries have very different experiences. Aged and disabled beneficiaries average between two and three visits and exhibit highly concentrated visit patterns. ESRD beneficiaries average seven visits and are more disbursed across the visit categories.

Second, the pattern of allowed charges is different for each of the beneficiary groups but the difference is greatest for ESRD beneficiaries. Beneficiaries making three visits or less account for 70 percent of charges for the aged, 55 percent of charges for the disabled, and only 9 percent of charges for the ESRD. Average charges per beneficiary increase for all beneficiaries as the number of visits increase, but the increase is much more rapid for ESRD beneficiaries. This is because the average charge per visit for ESRD beneficiaries remains stable as the number of visits increase and ESRD beneficiaries average more visits. Average charge per visit for aged and disabled beneficiaries falls as the number of HOPD visits increase. Also the average charge per visit is higher for ESRD beneficiaries than for aged or disabled.

With respect to the number of different physicians seen in the HOPD, the experience of the three beneficiary groups is relatively similar. The average number of physicians seen in the HOPD per beneficiary increases in a similar manner for all beneficiaries as the number of visits increase. This is to be expected, the greater the number of visits, the greater the number of different physicians seen. However, the average number of physicians per visit falls for all beneficiaries as the number of visits increase. The average ESRD

beneficiary sees twice as many different physicians during the year (4.6) as the average aged or disabled beneficiary (about 2.3).

ESRD beneficiaries have a substantially higher average number of services per beneficiary (34) than aged or disabled beneficiaries (about five). The average number of services per beneficiary increases for all beneficiaries as the number of visits increase, but (as with average charges) the increase is more rapid for ESRD beneficiaries. Unlike charges, however, the average number of services per visit remains stable for aged and disabled beneficiaries as the number of visits increase. For ESRD beneficiaries the average number of services per visit shows some increase across visit categories. ESRD beneficiaries accumulate more services per beneficiary because they average more visits and because the higher average number of services per visit for this group.

Examining the nature of physician services separately for beneficiary groups was useful in one other respect. We had assumed that the nature of physician services shifts from acute/diagnostic to acute/management as visits increase but that different chronic management services for the aged and disabled would be observed if examined separately. This appears to be true. To the aged making multiple HOPD visits, oncology services (radiation treatments and cancer chemotherapy) are often provided. To the disabled making multiple HOPD visits, psychotherapy and radiation treatment services are frequently provided. ESRD beneficiaries making multiple HOPD visits (not surprisingly) receive dialysis services. We also find that certain services are frequently provided to all beneficiaries regardless of the number of visits: routine x-rays, routine urinalysis, medical visits, emergency room visits, and ECGs.

Examining physician services by the reason for visit rather than by beneficiary group leads to some additional conclusions. The surgical procedure itself and surgical pathology stand-out as unique services on surgical claims. Only dialysis stands-out as a unique service on nonsurgical claims. The number of services common to both types of claims is striking. Routine chest x-rays, routine urinalysis, medical visits, emergency room visits, and ECGs account for many of the services reported on both surgical and nonsurgical claims.

VII. POLICY IMPLICATIONS

There are at least three physician payment implications from this analysis. First, ESRD beneficiaries make repeated visits to the HOPD to receive the same service—dialysis. Recognizing this, Medicare pays the physician a monthly capitated rate regardless of the number of treatments provided. Aged and disabled beneficiaries also make multiple visits to the HOPD in order to receive services on a serial basis. For the aged it is primarily oncology services and for the disabled it is both psychotherapy and oncology services (although there may be other services not captured by our analysis of high volume services). It seems that the same capitation principle used for dialysis could be used for other services provided on a serial basis.

Second, certain routine diagnostic services (venipuncture, chest x-rays, urinalysis, and ECGs) are frequently provided to all beneficiary types, regardless of the number of visits made to the HOPD or the reason for the visit. Such routine services should be considered for inclusion in a bundled payment to the physician for the HOPD visits (either as part of a surgical procedure or as part of a medical visit), rather than allowing the physician to bill separately for these services. This incremental approach to bundling has

begun to appear in legislation. The Omnibus Budget Reconciliation Act of 1990 disallows the physician from billing separately for the interpretation of an EKG if a medical visit service is also provided.

Although these services are frequently provided, bundling may not be as straightforward as suggested. It is not always clear that these services are provided at the same time as a "visit" service. High-volume routine testing services do not account for large proportions of physician charges for medical visits or ER visits in the HOPD. Chest x-rays and ECGs account for about 5 percent of medical visits and ER visit physician charges. The other diagnostic services in question individually account for less than 1 percent of charges. This suggests that much of the diagnostic testing is "referred ambulatory" (i.e., referred into HOPD from the office setting) and thus is not easily bundled to a HOPD visit service (but could be included as part of a surgical service).

Nonetheless, chest x-rays and ECGs are more likely to be included as a physician service in conjunction with a HOPD visit (medical or ER) service than are the other diagnostic services in question. For medical visits, chest x-rays and ECGs are included about 13 and 10 percent of the time, respectively. For ER visits, chest x-rays and ECGs are included about 25 and 21 percent of the time, respectively. The likelihood that an HOPD visit (medical or ER) includes these diagnostic services is higher for extended and comprehensive visit categories. There are not dramatic variations in the percentages of routine visits including those services by hospital types. This suggests that these services could be considered for bundling as part of these visit services.

Third, the small number of different physicians seen by aged and disabled beneficiaries in the HOPD (about two) suggests that the feasibility of

capitation on a broader basis should be explored. The fewer providers involved in a patient's treatment, the greater the ability of an insurer to make a single payment to the provider for that patient's treatment. We would caution, however, that the provider IDs used for this analysis are likely to understate the number of different physicians seen. Furthermore, we would note that beneficiaries who make visits to the HOPD tend to make very few visits. This may argue against capitating HOPD physician services.

REFERENCES

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Table 1
Distribution of Beneficiaries by HOPD Visit Category¹
CY 1987

Number of Visits	Number of Beneficiaries	Percent of Beneficiaries
1	278,059	51.05%
2	120,559	22.13
3	59,661	10.95
4	31,720	5.82
5	18,290	3.36
6	11,122	2.04
7	7,166	1.32
8	4,901	0.90
9	3,385	0.62
10	2,446	0.45
11	1,781	0.33
12	1,290	0.24
13	979	0.18
14	740	0.14
15	537	0.10
16	373	0.07
17	330	0.06
18	248	0.05
19	214	0.04
20	152	0.03
21+	865	0.16
Total	544,818	100.00%

SOURCE: Urban Institute analysis of merged 1987 HCFA
HOP and BMAD files.

NOTE: Average number of visits per beneficiary = 2.28.

1. Visit categories are constructed by counting the number of unique dates of service the beneficiary had in the HOPD in 1987.

Table 1a

Distribution of Beneficiaries by HOPD Visit Category
Aged, Disabled, and ESRD

Visit Category	Aged		Disabled		ESRD	
	Number of Beneficiaries	Percent of Beneficiaries	Number of Beneficiaries	Percent of Beneficiaries	Number of Beneficiaries	Percent of Beneficiaries
1	255,164	51.90%	22,201	46.61%	694	12.57%
2	109,967	22.37	10,073	21.15	519	9.40
3	53,695	10.92	5,462	11.47	504	9.13
4	28,130	5.72	3,158	6.63	432	7.82
5	15,919	3.24	1,991	4.18	380	6.88
6	9,489	1.93	1,286	2.70	347	6.28
7	5,988	1.22	855	1.80	323	5.85
8	3,942	0.80	644	1.35	315	5.70
9	2,609	0.53	450	0.94	326	5.90
10	1,837	0.37	335	0.70	274	4.96
11	1,310	0.27	224	0.47	247	4.47
12	860	0.17	184	0.39	246	4.45
13	625	0.13	140	0.29	214	3.87
14	480	0.10	116	0.24	144	2.61
15	342	0.07	76	0.16	119	2.15
16	221	0.04	64	0.13	88	1.59
17	197	0.04	51	0.11	82	1.48
18	139	0.03	44	0.09	65	1.18
19	142	0.03	37	0.08	35	0.63
20	80	0.02	32	0.07	40	0.72
21+	530	0.11	206	0.43	129	2.34
Total	491,666	100.00%	47,629	100.00%	5,523	100.00%
Descriptive Statistics: Number of Visits Per Beneficiary						
Mean	2.18		2.67		7.32	
Stand. Deviation	2.13		3.28		5.60	
CV	0.98		1.23		0.77	

Table 2
BMAD Allowed Charges by HOPD Visit Category¹
CY 1987

Number of Visits	Percent of Charges	Average Charge per Visit	Average Charge per Beneficiary
1	28.97%	\$157.95	\$157.95
2	23.01	144.65	289.29
3	14.42	122.09	366.27
4	9.26	110.60	442.40
5	6.08	100.78	503.88
6	4.11	93.39	560.33
7	2.95	89.29	625.03
8	2.23	86.39	691.08
9	1.66	82.52	742.69
10	1.39	86.10	861.00
11	1.09	84.58	930.38
12	0.86	83.79	1,005.43
13	0.70	83.52	1,085.80
14	0.58	84.56	1,183.78
15	0.45	85.04	1,275.61
16	0.34	86.63	1,386.06
17	0.32	86.10	1,463.64
18	0.23	76.84	1,383.06
19	0.21	76.98	1,462.62
20	0.18	89.47	1,789.47
21+	0.97	59.47	1,697.11
Total	100.00%	\$122.10	\$278.24

SOURCE: Urban Institute analysis of merged 1987 HCFA HOP and BMAD file.

NOTE: Average number of visits per beneficiary = 2.28.

1. Visit categories are constructed by counting the number of unique dates of service the beneficiary had in the HOPD in 1987.

Table 2a

BMAD Allowed Charges by HOPD Visit Category
Aged, Disabled, and CRD Beneficiaries

Visit Category	Aged				Disabled				CRD			
	Total Allowed Charges (thou.)	Percent Allowed Charges	Average Charge per Beneficiary	Average Charge per Visit	Total Allowed Charges (thou.)	Percent Allowed Charges	Average Charge per Beneficiary	Average Charge per Visit	Total Allowed Charges (thou.)	Percent Allowed Charges	Average Charge per Beneficiary	Average Charge per Visit
1	\$41,662	30.70%	\$163.28	\$163.28	\$2,160	22.32%	\$97.29	\$97.29	\$97	1.57%	\$139.77	\$139.77
2	32,887	24.23	299.06	149.53	1,808	18.68	179.49	89.74	181	2.93	348.75	174.37
3	20,308	14.96	378.21	126.07	1,310	13.53	239.84	79.95	234	3.78	464.29	154.76
4	12,754	9.40	453.39	113.35	977	10.09	309.37	77.34	303	4.90	701.39	175.35
5	8,149	6.00	511.90	102.38	757	7.82	380.21	76.04	310	5.01	815.79	163.16
6	5,375	3.96	566.45	94.41	520	5.37	404.35	67.39	337	5.45	971.18	161.86
7	3,743	2.76	625.08	89.30	382	3.95	446.78	63.83	354	5.72	1,095.98	156.57
8	2,657	1.96	674.02	84.25	340	3.51	527.95	65.99	390	6.30	1,238.10	154.76
9	1,844	1.36	706.78	78.53	252	2.60	560.00	62.22	417	6.74	1,279.14	142.13
10	1,463	1.08	796.41	79.64	201	2.08	600.00	60.00	442	7.14	1,613.14	161.31
11	1,067	0.79	814.50	74.05	146	1.51	651.79	59.25	444	7.18	1,797.57	163.42
12	711	0.52	826.74	68.90	117	1.21	635.87	52.99	469	7.58	1,906.50	158.88
13	542	0.40	867.20	66.71	87	0.90	621.43	47.80	434	7.01	2,028.04	156.00
14	480	0.35	1,000.00	71.43	83	0.86	715.52	51.11	313	5.06	2,173.61	155.26
15	344	0.25	1,005.85	67.06	71	0.73	934.21	62.28	269	4.35	2,260.50	150.70
16	235	0.17	1,063.35	66.46	50	0.52	781.25	48.83	232	3.75	2,636.36	164.77
17	237	0.17	1,203.05	70.77	42	0.43	823.53	48.44	204	3.30	2,487.80	146.34
18	150	0.11	1,079.14	59.95	42	0.43	954.55	53.03	152	2.46	2,338.57	129.91
19	177	0.13	1,246.48	65.60	36	0.37	972.97	51.21	99	1.60	2,828.57	148.87
20	96	0.07	1,200.00	60.00	37	0.38	1,156.25	57.81	140	2.26	3,500.00	175.00
21+	840	0.62	1,584.91	55.42	261	2.70	1,266.99	41.95	367	5.93	2,844.96	111.04
Total	\$135,721	100.00%	\$276.04	\$126.36	\$9,679	100.00%	\$203.22	\$76.17	\$6,188	100.00%	\$1,120.41	\$153.16

Table 3

Average Number of Providers and Services by HOPD Visit Category¹

Number of Visits	Average Number of Providers per Beneficiary	Average Number of Services per Beneficiary	Average Number of Services per Visit
1	1.50	2.31	2.31
2	2.43	4.47	2.24
3	3.13	6.57	2.19
4	3.67	8.67	2.17
5	4.09	10.77	2.15
6	4.50	13.03	2.17
7	4.79	15.11	2.16
8	5.06	17.41	2.18
9	5.26	19.80	2.20
10	5.46	23.19	2.32
11	5.47	24.70	2.25
12	5.70	33.41	2.78
13	5.80	38.48	2.96
14	6.05	35.06	2.50
15	6.39	40.69	2.71
16	6.68	41.41	2.59
17	7.38	44.16	2.60
18	7.15	45.96	2.55
19	7.28	42.93	2.26
20	7.80	49.74	2.49
21+	7.80	59.37	2.08
Total	2.34	5.12	2.25

SOURCE: Urban Institute analysis of merged 1987 HCFA HOP and BMAD files.

NOTE: Average number of visits per beneficiary = 2.28.

1. Visit categories are constructed by counting the number of unique dates of service the beneficiary had in the HOPD in 1987.

Table 3a

Average Number of Providers and Services
by HOPD Visit Category
Aged, Disabled, and CRD

Visit Category	Aged			Disabled			CRD		
	No. of Phys/ Bene	No. of Phys/ Visit	No. of Serv/ Bene	No. of Phys/ Bene	No. of Phys/ Visit	No. of Serv/ Bene	No. of Phys/ Bene	No. of Phys/ Visit	No. of Serv/ Bene
1	1.51	1.51	2.32	1.44	1.44	2.15	1.56	1.56	3.76
2	2.44	1.22	4.48	2.34	1.17	4.19	2.60	1.30	7.97
3	3.14	1.05	6.56	3.00	1.00	6.10	3.26	1.09	12.29
4	3.67	0.92	8.59	3.62	0.91	7.91	4.02	1.00	19.00
5	4.08	0.82	10.64	4.07	0.81	9.71	4.40	0.88	21.65
6	4.49	0.75	12.67	4.49	0.75	11.52	4.97	0.83	28.54
7	4.77	0.68	14.49	4.71	0.67	13.04	5.35	0.76	32.14
8	5.00	0.62	16.39	5.18	0.65	14.73	5.61	0.70	35.54
9	5.18	0.58	18.27	5.52	0.61	18.02	5.53	0.61	34.46
10	5.44	0.54	20.61	5.53	0.55	18.49	5.51	0.55	46.28
11	5.55	0.50	21.95	5.51	0.50	21.19	5.00	0.45	42.46
12	5.60	0.47	23.46	6.31	0.53	22.40	5.58	0.47	76.44
13	5.61	0.43	25.36	6.26	0.48	23.22	6.06	0.47	86.79
14	5.79	0.41	28.29	6.25	0.45	25.64	6.74	0.48	65.22
15	6.01	0.40	28.21	6.88	0.46	31.22	7.17	0.48	82.60
16	6.12	0.38	31.12	6.98	0.44	27.09	7.85	0.49	77.66
17	6.86	0.40	33.40	7.55	0.44	29.90	8.51	0.50	78.87
18	6.29	0.35	36.64	7.80	0.43	37.68	8.55	0.48	71.49
19	6.28	0.33	40.68	9.81	0.52	33.43	8.63	0.45	62.14
20	6.56	0.33	36.93	8.50	0.43	36.88	9.70	0.49	85.65
21+	6.41	0.22	50.72	10.29	0.34	57.29	9.53	0.37	98.25
Total	2.30	1.05	4.78	2.46	0.92	5.33	4.64	0.63	34.05
									4.66

Table 4

Rank of Top Twenty Physician Services,
Provided to Aged Beneficiaries
by Visit Category¹

Physician Services	Visit Category									
	1	2	3	4	5	7	10	15	20	21+
SURGERY										
11040 Debridement Skin, Partial Thickness	na	na	na	na	na	na	na	na	19	na
36415 Routine Venipuncture Specimen Collect.	10	9	6	6	6	5	7	10	8	13
66984 Extracap. Cataract Removal/IOL Insert.	9	10	13	14	na	na	na	na	na	na
RADIOLOGY										
71010 Radiologic Exam, Chest, Single View	8	7	7	7	7	6	11	12	13	19
71020 Radiologic Exam, Chest, Two Views	1	1	1	1	1	3	3	3	3	5
72110 Radiologic Exam, Spine, Lumbosacral Complete,	19	na	na	na	na	na	na	na	na	na
74270 Radiologic Exam, Colon Barium Enema	18	17	15	na	na	na	na	na	na	na
76091 Mammography Bilateral	5	8	9	12	15	na	na	na	na	na
77400 Daily Megavoltage Manage./Simple	na	na	na	na	na	20	14	na	17	7
77405 Daily Megavoltage Manage./Intermed.	na	na	na	na	13	11	13	11	5	2
77410 Daily Megavoltage Manage./Complex	na	na	na	16	14	10	9	14	7	1
77415 Therapeutic Radiology	na	na	na	na	na	na	na	20	na	12
LABORATORY/PATHOLOGY										
81000 Routine Urinalysis w/Microscopy	12	12	12	11	12	13	18	na	15	na
85610 Prothrombin Time	na	na	na	na	na	na	na	na	20	na
88304 Surg. Path. Gross/Micro Abnormal Spec.	15	15	18	18	na	na	na	na	na	na
88305 Surg. Path. Gross/Micro Abnormal Spec.	na	20	20	na	na	na	na	na	na	na
MEDICAL—HOPD VISITS (coded as office)²										
90040 Estab. Patient/Brief	16	13	10	9	8	4	5	5	6	8
90050 Estab. Patient/Limited	4	4	4	3	3	2	2	2	2	4
90060 Estab. Patient/Intermed	3	3	3	2	2	1	1	1	1	3
90070 Estab. Patient/Extended	20	16	14	13	10	9	10	6	18	16
MEDICAL—HOPD VISITS (coded as hospital)²										
90220 Initial History, Exam, Diag./Prep. Record	17	19	17	15	19	16	20	16	16	na
90250 Subsequent/Each Day/ Limited	na	na	na	na	16	17	na	na	na	20
90260 Subsequent/Each Day/Intermed.	na	na	na	19	17	18	17	na	na	na
MEDICAL—EMERGENCY ROOM VISITS										
90505 New Patient/Brief	13	14	16	16	na	na	na	na	na	na
90510 New Patient/Limited	7	6	8	8	9	8	12	13	11	15
90515 New Patient/Intermed.	6	5	5	5	5	7	8	8	10	14
90517 New Patient/Extended	14	18	19	20	na	na	na	17	12	na
90540 Estab./Patient Brief	na	na	na	na	na	na	na	18	na	na
90550 Estab./Patient Limited	na	na	na	na	20	19	16	9	14	11
90560 Estab./Patient Intermed.	na	na	na	na	18	15	15	7	9	6
90570 Estab./Patient Extended	na	na	na	na	na	na	na	19	na	na
MEDICAL—PROCEDURES										
M0945 Outpatient Dialysis Physicians' Services	na	na	na	na	na	na	19	na	na	na
93000 Electrocardiogram, Interpret. and Report	11	11	11	10	11	14	6	na	na	na
93010 Routine Electrocardiogram	2	2	2	4	4	3	4	4	4	9
96500 Chemotherapy Injection, Physician Super.	na	na	na	na	na	na	na	15	na	10
96501 Chemotherapy Injection, Physician Super.	na	na	na	na	na	na	na	na	na	18
96504 Chemotherapy Injection, Physician Super.	na	na	na	na	na	na	na	na	na	17

1. Visit refers to a day of service in the hospital outpatient department in 1987. During a single visit, a beneficiary can receive a number of different services.
2. There is no explicit designation in the CPT-4 codes for a medical visit in the HOPD. Thus, medical visits provided in this setting are coded as office or hospital visits.

Table 5

Rank of Top Twenty Physician Services Provided to Disabled Beneficiaries
by Visit Category¹

Physician Services	Visit Category									
	1	2	3	4	5	7	10	15	20	21+
SURGERY										
29580 Strapping Unna Boot	na	na	na	na	na	na	na	na	11	na
36415 Routine Venipuncture	11	9	10	10	9	13	10	16	19	na
RADIOLOGY										
70450 CAT, Head or Brain	na	na	na	na	16	na	na	na	na	na
71010 Radiologic Exam, Chest, Single View	7	8	7	9	10	11	14	15	na	na
71020 Radiologic Exam, Chest, Two Views	1	1	1	1	1	3	3	8	2	8
72110 Radiologic Exam, Spine	19	19	na	na	na	na	na	na	na	na
73562 Radiologic Exam, Knee	na	na	20	na	na	na	na	na	na	na
73630 Radiologic Exam, Foot, Complete	18	na	na	20	na	na	na	19	na	na
74000 Radiologic Exam, Abdomen, Single	na	na	19	na	na	na	na	na	na	na
74020 Radiologic Exam, Abdomen, Complete	na	na	na	na	na	na	na	20	na	na
76091 Mammography Bilateral	9	12	13	17	18	na	na	na	na	na
77400 Daily Megavoltage Manage./Simple	na	na	na	na	na	na	na	na	na	17
77405 Daily Megavoltage Manage./Intermed.	na	na	na	19	na	na	9	na	17	13
77410 Daily Megavoltage Manage./Complex	na	na	na	na	na	na	19	na	na	20
LABORATORY/PATHOLOGY										
81000 Routine Urinalysis	13	14	16	16	15	18	na	na	na	na
MEDICAL—HOPD VISITS (coded as office)²										
90040 Establish Patient/Brief	12	10	9	7	7	7	7	7	8	16
90050 Establish Patient/Limited	6	4	3	3	2	1	2	5	4	4
90060 Establish Patient/Intermed.	5	5	2	2	3	2	1	3	7	6
90070 Establish Patient/Extended	16	16	11	12	14	10	13	10	16	15
MEDICAL—HOPD VISITS (coded as hospital)²										
90220 Initial/History	15	17	18	18	19	na	20	na	15	na
90240 Subsequent/Each Day/Brief	na	na	na	na	na	na	na	na	20	na
90250 Subsequent/Each Day/Limited	na	na	na	na	na	na	na	13	na	na
90260 Subsequent/Each Day/Intermed.	na	na	na	na	20	na	na	na	na	na
MEDICAL—EMERGENCY ROOM VISITS										
90500 New Patient/Minimal	na	na	na	na	na	na	na	18	na	na
90505 New Patient/Brief	8	7	8	8	8	8	8	1	6	7
90510 New Patient/Limited	2	2	4	5	4	5	4	4	1	2
90515 New Patient/Intermed.	4	6	6	6	6	4	5	6	3	5
90517 New Patient/Extended	10	11	12	11	11	14	16	14	10	12
90540 Established Patient/Brief	na	15	na	na	na	16	na	na	13	14
90550 Established Patient/Limited	17	18	17	13	12	12	15	17	9	1
90560 Established Patient/Intermed.	20	20	15	14	13	9	12	12	12	10
90570 Established Patient/Extended	na	na	na	na	na	na	na	na	18	na
MEDICAL—PROCEDURES										
90841 Individual Psychotherapy/Physician Diag. Eval., and Drug	na	na	na	na	na	na	na	na	na	18
09843 Individual Psychotherapy/Physician Diag. Eval., and Drug Manag.	na	na	na	na	na	17	17	na	na	19
90844 Individual Psychotherapy/Physician Diag. Eval., and Drug Manag.	na	na	na	na	na	15	18	11	na	11
90853 Group Psychotherapy/Physician	na	na	na	na	na	na	na	na	na	3
90862 Chemotherapy Management	na	na	na	na	na	na	11	na	na	na
M0945 Outpatient Dialysis Physicians'	na	na	na	na	na	20	na	na	na	na
90988 Super. Hemodialysis (Facility), Monthly	na	na	na	na	na	na	na	2	na	na
93000 Routine Electrocardiogram/Interpret.	14	13	14	15	17	19	na	na	na	na
93010 Routine Electrocardiogram/Interpret.	3	3	5	4	5	6	6	9	5	9
96508 Chemotherapy Injection	na	na	na	na	na	na	na	na	14	na

1. Visits refers to a day of service in the hospital outpatient department in 1987. During a single visit, a beneficiary can receive a number of different services.

2. There is no explicit designation in the CPT-4 codes for a medical visit in the HOPD. Thus, medical visits provided in this setting are coded as office or hospital visits.

Table 6

Rank of Top Twenty Physician Services,
Provided to ESRD Beneficiaries
by Visit Category¹

Physician Services	Visit Category									
	1	2	3	4	5	7	10	15	20	21+
SURGERY										
36415 Routine Venipuncture	19	14	13	15	20	16	15	12	na	12
50360 Renal Homotransplantation	18	na	na	na	na	na	na	na	na	na
RADIOLOGY										
71010 Radiologic Exam, Chest, Single View	5	7	8	11	12	10	10	11	10	20
71020 Radiologic Exam, Chest, Two Views	4	2	5	5	3	5	6	5	5	8
77410 Daily Megavoltage Manage./Complex	na	na	na	na	na	na	16	na	17	na
LABORATORY/PATHOLOGY										
80019 Automated Multichannel Test	20	20	17	na	na	15	20	na	na	16
81000 Routine Urinalysis w/Microscopy	13	na	15	14	19	19	na	17	20	15
82728 Ferritin	na	na	na	na	18	na	na	na	15	na
82947 Glucose except Urine	na	na	na	na	na	na	na	20	14	3
84100 Phosphorus (phosphate) Blood	na	na	na	na	na	na	na	na	na	19
84132 Potassium Blood	na	na	na	na	na	na	18	na	9	11
85022 Blood Count Hemogram	na	na	18	na	na	na	na	na	na	na
86021 Antibody Identification Leukocyte Antibodies	na	4	na	na	na	12	na	na	na	na
86287 Hepatitis B Surface Antigen	15	11	9	8	6	6	7	7	6	7
86291 Hepatitis B Surface Antibody	na	na	na	na	na	20	na	na	13	na
88332 Consultation during Surgery	na	na	na	na	na	na	17	na	na	na
MEDICAL—HOPD VISITS (coded as office)²										
90040 Establish Patient/Brief	na	18	na	18	17	na	na	18	na	13
90050 Establish Patient/Limited	8	9	7	10	11	11	8	10	16	10
90060 Establish Patient/Intermed.	9	5	6	7	7	8	9	8	na	5
90070 Establish Patient/Extended	17	na	19	na	16	18	na	na	na	17
MEDICAL—HOPD VISITS (coded as Hospital)²										
90220 Initial/History, Exam, Diag./Prep. Record	7	12	10	9	9	13	13	9	12	18
90240 Subsequent/Each Day/Brief	na	na	na	17	na	na	na	na	11	na
90250 Subsequent/Each Day/Limited	6	na	14	13	10	na	12	16	7	14
90260 Subsequent/Each Day/Intermed.	16	17	16	12	8	9	11	14	na	na
90270 Subsequent/Each Day/Extended	na	16	na	na	na	na	na	na	na	na
MEDICAL—EMERGENCY ROOM VISITS										
90510 New Patient/Limited	14	19	na	na	na	14	na	19	na	na
90515 New Patient/Intermed.	10	13	12	16	15	na	14	15	na	na
90517 New Patient/Extended	na	na	na	na	na	na	na	na	19	na
90620 Initial Consultation/Comprehensive	na	na	na	na	na	17	na	na	na	na
MEDICAL—PROCEDURES										
M0945 Outpatient Dialysis Physicians' Services	1	1	1	1	1	1	1	4	1	1
90951 Hemodialysis for ESRD, Stabilizing	na	na	20	19	na	na	na	na	na	na
90955 Hemodialysis for ESRD, Maintenance	11	14	na	20	na	na	19	na	8	na
90982 Peritoneal Dialysis for ESRD	na	na	na	na	na	na	na	13	na	na
90988 Super. Hemodialysis (Facility), Monthly	12	8	2	2	2	3	2	2	3	3
90991 Home Hemodialysis Care, (Outpatient)	2	6	3	3	4	4	3	1	2	6
90994 Super. of CAPD (Home or Out-Patient), Monthly	na	na	na	6	13	2	4	3	na	2
90999 Unlisted Dialysis Procedure, (hospital or out-patient)	na	10	11	na	14	na	na	na	na	na
93010 Routine Electrocardiogram, Interpret. and Report	3	3	4	4	5	7	5	6	4	9
99172 Critical Care, Exam., Eval. and Treat.	na	na	na	na	na	na	na	na	18	na

1. Visit refers to a day of service in the hospital outpatient department in 1987. During a single visit, a beneficiary can receive a number of different services.

2. There is no explicit designation in the CPT-4 codes for a medical visit in the HOPD. Thus, medical visits provided in this setting are coded as office or hospital visits.

Table 7

25 Most Frequently Provided Physician Services, Surgical Visit

Physician Services	Number of Services	Percentage of Surgery Visit Services	Total Allowed Charges	Percentage of Surgery Visit Charges	Average Allowed Charge
SURGERY					
43235 UPPER GASTROINTESTINAL ENDOSCOPY	4,285	0.9%	1,186,213	1.7%	\$276.83
43239 UPPER GASTROINTESTINAL ENDOSCOPY	2,938	0.6	928,435	1.3	316.01
45330 SIGMOIDOSCOPY, FLEXIBLE FIBEROPTIC DIAGNOSTIC	3,982	0.9	477,022	0.7	119.79
45378 COLONOSCOPY, FIBEROPTIC	4,530	1.0	1,756,529	2.5	387.75
45385 COLONOSCOPY, FIBEROPTIC, BEYOND SPLENIC FLEXURE	3,297	0.7	1,947,337	2.8	590.64
52000 CYSTOURETHROSCOPY (SEPARATE PROCED.)	5,545	1.2	598,257	0.9	107.89
66983 INTRACAPSULAR CATARACT EXTRACTION (ONE STAGE PROCED.)	7,915	1.7	3,649,158	5.2	461.04
66984 EXTRACAPSULAR CATARACT REMOVAL (ONE STAGE PROCEDURE),	25,229	5.4	26,079,556	37.5	1,033.71
RADIOLOGY					
71010 RADIOLOGIC EXAM, CHEST, SINGLE VIEW,	7,285	1.2	82,441	0.1	11.32
71020 RADIOLOGIC EXAM, CHEST, TWO VIEWS	23,865	5.1	359,936	0.5	15.08
PATHOLOGY/LABORATORY					
81000 ROUTINE URINALYSIS	3,660	0.8	15,070	0.0	4.12
88300 SURGICAL PATH., GROSS EXAM ONLY	6,064	1.3	68,260	0.0	11.26
88302 SURGICAL PATH., GROSS AND MICROSCOPIC, NORMAL TISSUE	2,931	0.6	67,650	0.0	23.08
88304 SURGICAL PATH., GROSS AND MICROSCOPIC, ABNORMAL TISSUE	11,195	2.4	374,995	0.5	33.50
88305 SURGICAL PATH., GROSS AND MICROSCOPIC ABNORMAL TISSUE	11,348	2.4	602,653	0.9	53.11
MEDICINE					
90040 MEDICAL VISIT, EST. PATIENT, BRIEF	5,776	1.2	90,134	0.1	15.60
90050 MEDICAL VISIT, EST. PATIENT LIMITED	16,324	3.5	302,181	0.4	18.51
90060 MEDICAL VISIT, EST. PATIENT INTERMED.	18,782	4.0	432,767	0.6	23.04
90070 MEDICAL VISIT, EST. PATIENT, EXTENDED	3,977	0.9	116,179	0.2	29.21
90220 INITIAL HOSPITAL CARE	3,612	0.8	242,037	0.3	67.01
90510 ER VISIT, NEW PATIENT, LIMITED	5,638	1.2	133,337	0.2	23.65
90515 ER VISIT, NEW PATIENT, INTERMED.	6,927	1.5	234,935	0.3	33.92
90517 ER VISIT, NEW PATIENT, EXTENDED	2,914	0.6	118,717	0.2	40.74
93000 ROUTINE ELECTROCARDIOGRAM, INTERPRET. AND REPORT	5,425	1.2	147,306	0.2	27.15
93010 ROUTINE ELECTROCARDIOGRAM, INTERPRET. AND REPORT	25,538	5.5	269,405	0.4	10.55
TOTAL FOR TOP TWENTY-FIVE SERVICES RELATED TO SURGERY VISIT	218,982	47.1%	\$40,280,510	57.9%	\$183.94
TOTAL FOR ALL SERVICES RELATED TO SURGERY VISITS	464,455	100.00%	\$69,559,641	100.00%	\$149.77

Table 8

25 Most Frequently Provided Physician Services, Non-Surgical Visit

Physician Service	Number of Services	Percentage of Non-surgery Visit Services	Total Allowed Charges	Percentage of Non-surgery Visit Charges	Average Allowed Charge
SURGERY					
36415 ROUTINE VENIPUNCTURE	48,460	2.1%	\$119,341	0.1%	\$2.46
RADIOLOGY					
71010 RADIOLOGIC EXAM, CHEST, SINGLE VIEW	45,900	2.0	511,442	0.6	11.14
71020 RADIOLOGIC EXAM, CHEST, TWO VIEWS	147,402	6.3	2,196,546	2.7	14.90
74270 RADIOLOGIC EXAM, COLON BARIUM ENEMA	15,938	0.7	481,084	0.6	30.18
76091 MAMMOGRAPHY BILATERAL	40,620	1.7	1,053,645	1.3	25.94
PATHOLOGY/LABORATORY					
81000 URINALYSIS ROUTINE	29,851	1.3	128,862	0.2	4.32
MEDICINE					
90040 MEDICAL VISIT, EST. PATIENT, BRIEF	36,854	1.6	571,340	0.7	15.50
90050 MEDICAL VISIT, EST. PATIENT, LIMITED	107,588	4.6	1,968,130	2.4	18.29
90060 MEDICAL VISIT, EST. PATIENT, INTERMEDIATE	109,454	4.7	2,558,618	3.1	23.38
90070 MEDICAL VISIT, EST. PATIENT, EXTENDED	24,461	1.1	740,975	0.9	30.29
90220 INITIAL HOSPITAL CARE COMP. HISTORY/EXAM	19,265	0.8	1,328,357	1.6	68.95
90250 SUBSEQUENT HOSPITAL CARE, EACH DAY, LIMITED	16,522	0.7	337,620	0.4	20.43
90260 SUBSEQUENT HOSPITAL CARE, EACH DAY INTERMED.	16,655	0.7	394,044	0.5	23.66
90505 ER VISIT NEW PATIENT, BRIEF	23,937	1.0	423,643	0.5	17.70
90510 ER VISIT NEW PATIENT, LIMITED	55,084	2.4	1,288,505	1.6	23.39
90515 ER VISIT NEW PATIENT, INTERMED.	59,582	2.6	1,944,243	2.4	32.63
90517 ER VISIT NEW PATIENT, EXTENDED	20,440	0.9	868,442	1.1	42.49
90550 ER VISIT ESTABLISHED PATIENT, LIMITED	17,682	0.8	304,764	0.4	17.23
90560 ER VISIT ESTABLISHED PATIENT, INTERMED.	18,467	0.8	381,258	0.5	20.64
M0945 OUTPATIENT DIALYSIS PHYSICIANS' SERVICES	46,694	2.0	883,899	1.1	18.93
90988 SUPER. HEMODIALYSIS (FACILITY), MONTHLY	19,812	0.9	1,019,473	1.2	51.46
90991 SUPER. HEMODIALYSIS (HOME), MONTHLY	29,354	1.3	694,859	0.8	23.67
90994 SUPER. OF CAPD, (HOME OR OUTPATIENT), MONTHLY	17,404	0.7	241,691	0.3	13.89
93000 ROUTINE ELECTROCARDIOGRAM, INTERPRET. AND REPORT	30,038	1.3	823,767	1.0	27.42
93010 ROUTINE ELECTROCARDIOGRAM, INTERPRET. AND REPORT	95,994	4.1	1,051,894	1.3	10.96
TOTAL FOR TOP TWENTY-FIVE SERVICES RELATED TO NON-SURGERY VISITS	1,093,458	47.0%	\$22,315,442	27.2%	\$20.41
TOTAL FOR ALL SERVICES RELATED TO NON-SURGERY VISITS	2,325,706	100.00%	\$82,028,830	100.00%	\$35.27

Table 9

Distribution of Physician Services and Charges by HCPCS Code
for Selected HOPD Medical Visits, 1987

40 Medical Visit Established Patient Brief Service

HCPCS Code & Description	Units of Service	Percent of Service Units	Allowed Charge	Percent of Allowed Charge	Average Allowed Charge
21 DISCUSSION OF SECONDARY MEMBRANEOUS CATARACT ('AFTER CATARACT') AND/OR ANTERIOR HYALOID	10	0.02%	\$4,333	0.60%	\$433.30
84 EXTRACAPSULAR CATARACT REMOVAL WITH INSERTION OF INTRAOCULAR PROSTHESIS (ONE STAGE PROCEDURE)	4	0.01	5,322	0.73	\$1,330.50
70 COMPUTERIZED AXIAL TOMOGRAPHY, HEAD OR BRAIN WITHOUT CONTRAST MATERIAL	40	0.10	4,411	0.61	110.28
20 RADIOLOGIC EXAMINATION, CHEST, TWO VIEWS	1,239	2.98	18,992	2.61	15.33
40 OFFICE MEDICAL SERVICE, ESTABLISHED PATIENT BRIEF SERVICE	30,271	72.86	465,278	63.92	15.37
50 OFFICE MEDICAL SERVICE, ESTABLISHED PATIENT LIMITED SERVICE	236	0.57	4,134	0.57	17.52
50 OFFICE MEDICAL SERVICE, ESTABLISHED PATIENT INTERMEDIATE SERVICE	241	0.58	8,702	1.20	36.11
30 ELECTROCARDIOGRAM, ROUTINE, WITH INTERPRETATION AND REPORT	302	0.73	8,658	1.19	28.67
10 ELECTROCARDIOGRAM, ROUTINE, INTERPRETATION AND REPORT ONLY	322	0.78	3,893	0.53	12.09
ER	8,883	21.38	204,173	28.05	22.98
al	41,548	100.00%	\$727,896	100.00%	\$17.52

60 Medical Visit Established Patient Limited Service

HCPCS Code & Description	Units of Service	Percent of Service Units	Allowed Charge	Percent of Allowed Charge	Average Allowed Charge
5 TRABECULOPLASTY BY LASER SURGERY, ONE OR MORE SESSIONS	16	0.01%	\$11,500	0.51%	\$718.75
4 EXTRACAPSULAR CATARACT REMOVAL WITH INSERTION OF INTRAOCULAR LENS (ONE STAGE PROCEDURE)	10	0.01	\$12,286	0.54	1,228.60
0 RADIOLOGIC EXAMINATION, CHEST, TWO VIEWS	3,975	3.35	64,805	2.86	16.30
0 OFFICE MEDICAL SERVICE, ESTABLISHED PATIENT LIMITED SERVICE	83,703	70.55	1,518,135	66.92	18.14
0 OFFICE MEDICAL SERVICE, ESTABLISHED PATIENT INTERMEDIATE SERVICE	516	0.43	12,243	0.54	23.73
0 ELECTROCARDIOGRAM, ROUTINE, WITH INTERPRETATION AND REPORT	1,511	1.27	46,237	2.04	30.60
ER	28,908	24.37	603,252	26.59	20.87
1	118,639	100.00%	\$2,268,458	100.00%	\$19.12

0 Medical Visit Established Patient Intermediate Service

HCPCS Code & Description	Units of Service	Percent of Service Units	Allowed Charge	Percent of Allowed Charge	Average Allowed Charge
4 EXTRACAPSULAR CATARACT REMOVAL WITH INSERTION OF INTRAOCULAR LENS (ONE STAGE PROCEDURE)	21	0.02%	\$22,077	0.80%	\$1,051.29
0 RADIOLOGIC EXAMINATION, CHEST, TWO VIEWS	3,907	3.20	68,118	2.46	17.43
0 OFFICE MEDICAL SERVICE, ESTABLISHED PATIENT INTERMEDIATE SERVICE	83,330	68.20	1,922,241	69.32	23.07
0 ELECTROCARDIOGRAM, ROUTINE, WITH INTERPRETATION AND REPORT	2,870	2.35	73,166	2.64	25.49
ER	32,056	26.24	687,364	24.79	21.44
1	122,184	100.00%	\$2,772,966	100.00%	\$22.70

Source: Urban Institute analysis of merged 1987 HCFA HOP and BMAD files.

Table 10

Distribution of Physician Services and Charges, by HCPCS Code
for Selected Emergency Room HOPD Visits, 1987

Emergency Room Visit New Patient Brief Service

Code & Description	Units of Service	Percent of Service Units	Allowed Charge	Percent of Allowed Charge	Average Allowed Charge
1 SIMPLE REPAIR OF SUPERFICIAL WOUNDS	88	0.32%	\$2,973	0.54%	\$33.78
2 SIMPLE REPAIR OF SUPERFICIAL WOUNDS	66	0.24	3,153	0.57	47.77
3 TREATMENT OF CLOSED DISTAL RADIAL FRACTURE	20	0.07	5,445	0.98	272.25
4 TREATMENT OF CLOSED, COMPLEX, DISTAL RADIAL FRACTURE	10	0.04	2,870	0.52	287.00
5 OPEN TREATMENT OF CLOSED OR OPEN FEMORAL FRACTURE	5	0.02	2,882	0.52	576.40
6 CYSTECTOMY, COMPLETE, WITH URETEROILEAL CONDUIT OR SIGMOID BLADDER	1	0.00	2,800	0.51	2,800.00
7 EXTRACAPSULAR CATARACT REMOVAL WITH INSERTION OF INTRAOCULAR LENS (ONE STAGE PROCEDURE)	4	0.01	3,620	0.65	905.00
8 RADIOLOGIC EXAMINATION, CHEST SINGLE VIEW	410	1.50	4,174	0.75	10.18
9 RADIOLOGIC EXAMINATION, CHEST, TWO VIEWS	842	3.08	11,669	2.11	13.86
0 INITIAL HOSPITAL CARE COMPREHENSIVE HISTORY AND EXAMINATION	135	0.49	8,893	1.61	65.87
1 EMERGENCY DEPARTMENT SERVICE, NEW PATIENT BRIEF SERVICE	19,027	69.51	334,166	60.83	17.56
2 ELECTROCARDIOGRAM, ROUTINE, INTERPRETATION AND REPORT ONLY	964	3.52	9,471	1.71	9.82
	5,800	21.19	161,289	29.14	27.81
	27,372	100.00%	\$553,405	100.00%	\$20.22

Emergency Room Visit New Patient Limited Service

Code & Description	Units of Service	Percent of Service Units	Allowed Charge	Percent of Allowed Charge	Average Allowed Charge
3 TREATMENT OF CLOSED DISTAL RADIAL FRACTURE	59	0.09%	\$15,959	1.06%	\$270.49
4 TREATMENT OF CLOSED, COMPLEX, DISTAL RADIAL FRACTURE	28	0.04	9,128	0.61	326.00
5 EXTRACAPSULAR CATARACT REMOVAL WITH INSERTION OF INTRAOCULAR LENS (ONE STAGE PROCEDURE)	8	0.01	10,515	0.70	1,314.38
6 RADIOLOGIC EXAMINATION, CHEST SINGLE VIEW	1,292	1.96	13,809	0.92	10.69
7 RADIOLOGIC EXAMINATION, CHEST, TWO VIEWS	2,806	4.26	39,292	2.62	14.00
8 RADIOLOGIC EXAMINATION, SPINE, LUMBOSACRAL COMPLETE, WITH OBLIQUE VIEWS	596	0.90	12,369	0.83	20.75
9 RADIOLOGIC EXAMINATION, SHOULDER COMPLETE, MINIMUM OF TWO VIEWS	547	0.83	7,608	0.51	13.91
0 RADIOLOGIC EXAMINATION, HIP COMPLETE, MINIMUM OF TWO VIEWS	547	0.83	8,718	0.58	15.94
1 RADIOLOGIC EXAMINATION, ABDOMEN COMPLETE	478	0.73	8,266	0.55	17.29
2 INITIAL HOSPITAL CARE COMPREHENSIVE HISTORY AND EXAMINATION	258	0.39	17,542	1.17	67.99
3 EMERGENCY DEPARTMENT SERVICE, NEW PATIENT LIMITED SERVICE	40,748	61.84	934,618	62.36	22.94
4 ELECTROCARDIOGRAM, ROUTINE, INTERPRETATION AND REPORT ONLY	2,982	4.53	30,024	2.00	10.07
	15,544	23.59	390,849	26.08	25.14
	65,893	100.00%	\$1,498,697	100.00%	\$22.47

Emergency Room Visit New Patient Intermediate Service

Code & Description	Units of Service	Percent of Service Units	Allowed Charge	Percent of Allowed Charge	Average Allowed Charge
3 TREATMENT OF CLOSED DISTAL RADIAL FRACTURE	46	0.07%	\$12,835	0.67%	\$279.02
4 COMPUTERIZED AXIAL TOMOGRAPHY, HEAD OR BRAIN WITHOUT CONTRAST MATERIAL	178	0.26	14,637	0.77	82.23
5 RADIOLOGIC EXAMINATION, CHEST SINGLE VIEW	2,352	3.40	25,854	1.35	10.99
6 RADIOLOGIC EXAMINATION, CHEST, TWO VIEWS	4,165	6.03	58,815	3.08	14.12
7 RADIOLOGIC EXAMINATION, SPINE, LUMBOSACRAL COMPLETE, WITH OBLIQUE VIEWS	609	0.88	15,347	0.80	25.20
8 RADIOLOGIC EXAMINATION, HIP COMPLETE, MINIMUM OF TWO VIEWS	650	0.94	10,710	0.56	16.48
9 RADIOLOGIC EXAMINATION, ABDOMEN COMPLETE	902	1.31	16,194	0.85	17.95
0 INITIAL HOSPITAL CARE COMPREHENSIVE HISTORY AND EXAMINATION	454	0.66	31,625	1.66	69.66
1 EMERGENCY DEPARTMENT SERVICE, NEW PATIENT INTERMEDIATE SERVICE	37,328	54.04	1,168,296	61.22	31.30
2 INITIAL CONSULTATION COMPREHENSIVE	131	0.19	11,099	0.58	84.73
3 ELECTROCARDIOGRAM, ROUTINE, INTERPRETATION AND REPORT ONLY	5,222	7.56	55,800	2.92	10.69
	17,040	24.67	487,064	25.52	28.58
	69,077	100.00%	\$1,908,276	100.00%	\$27.63

Urban Institute analysis of merged 1987 HCFA HOP and BMAD files.

Table 11

Percentage of HOPD Visits Including Selected High Volume Tests, 1987

Medical Visit Code and Description	36415 Routine Venipuncture	70450 CAT Scan Head	71010 One View X-Ray	71020 Two View X-Ray	76091 Mammo- graphy	81000 Routine Urinalysis	93000 Routine ECG	93010 Routine ECG
90000 NEW PATIENT, BRIEF	3.88%	0.37%	1.53%	9.10%	1.85%	5.64%	3.05%	3.65%
90010 NEW PATIENT, LIMITED	5.28	0.14	1.66	11.12	0.87	6.83	3.93	4.16
90015 NEW PATIENT, INTERMEDIATE	6.21	0.22	1.30	12.52	0.99	7.45	6.07	4.83
90017 NEW PATIENT, EXTENDED	8.86	0.18	1.78	15.13	0.98	8.77	9.42	5.62
90020 NEW PATIENT, COMPREHENSIVE	10.40	0.46	1.69	18.03	1.32	12.34	16.46	6.42
90030 ESTABLISHED PATIENT, MINIMAL	7.85	0.16	1.01	6.86	1.19	4.57	2.76	3.03
90040 ESTABLISHED PATIENT, BRIEF	5.74	0.13	1.06	9.13	0.75	4.78	2.66	2.59
90050 ESTABLISHED PATIENT, LIMITED	8.36	0.18	1.17	11.02	0.74	5.46	4.41	2.47
90060 ESTABLISHED PATIENT, INTERMEDIATE	9.27	0.19	1.24	11.85	0.90	6.02	6.20	2.97
90070 ESTABLISHED PATIENT, EXTENDED	10.57	0.25	1.59	13.88	1.11	7.64	10.27	3.96
90080 ESTABLISHED PATIENT, COMPREHENSIVE	17.75	0.19	3.62	23.17	3.41	22.55	31.95	5.96
Total	8.89%	0.19%	1.35%	12.08%	0.99%	6.79%	6.90%	3.19%

Emergency Room Visit Code and Description	36415 Routine Venipuncture	70450 CAT Scan Head	71010 One View X-Ray	71020 Two View X-Ray	76091 Mammo- graphy	81000 Routine Urinalysis	93000 Routine ECG	93010 Routine ECG
90500 NEW PATIENT, MINIMAL	0.44%	0.25%	3.96%	6.52%	0.00%	0.33%	0.53%	8.23%
90505 NEW PATIENT, BRIEF	0.41	0.38	4.73	8.62	0.06	0.30	0.57	10.85
90510 NEW PATIENT, LIMITED	0.40	0.43	6.54	12.05	0.03	0.36	0.89	14.31
90515 NEW PATIENT, INTERMEDIATE	0.55	0.96	12.59	18.77	0.04	0.46	2.00	26.80
90517 NEW PATIENT, EXTENDED	0.60	2.21	22.10	21.45	0.02	0.52	2.33	38.93
90520 NEW PATIENT, COMPREHENSIVE	0.58	2.48	24.75	24.74	0.11	0.37	1.25	41.54
90530 ESTABLISHED PATIENT, MINIMAL	0.50	0.31	4.43	7.38	0.16	0.47	0.25	7.35
90540 ESTABLISHED PATIENT, BRIEF	0.34	0.18	4.32	7.92	0.25	0.26	0.43	8.11
90550 ESTABLISHED PATIENT, LIMITED	0.28	0.26	5.53	9.89	0.14	0.41	0.72	10.95
90560 ESTABLISHED PATIENT, INTERMEDIATE	0.45	0.45	7.62	12.82	0.17	0.33	1.24	14.67
90570 ESTABLISHED PATIENT, EXTENDED	0.44	1.03	11.53	16.40	0.15	0.55	1.97	22.18
90580 ESTABLISHED PATIENT, COMPREHENSIVE	0.83	1.06	16.02	17.91	0.41	0.95	1.60	24.88
Total	0.46%	0.77%	9.87%	14.34%	0.07%	0.40%	1.31%	19.77%

Source: Urban Institute analysis of merged 1987 HCFA HOP and BMAD files.

Table 12

Percentage of Medical Visits with Selected High Volume Tests
by Beneficiary Type and Hospital Type, 1987

	36415 Routine Venipuncture	70450 CAT Scan Head	71010 One View X-Ray	71020 Two View X-Ray	76091 Mammo- graphy	81000 Routine Urinalysis	93000 Routine ECG	93010 Routine ECG
Total	8.89%	0.19%	1.35%	12.08%	0.99%	6.79%	6.90%	3.19%
Beneficiary Type								
Aged	9.26	0.20	1.41	12.63	1.05	6.94	7.36	3.29
Disabled	6.04	0.20	0.98	8.77	0.63	4.71	4.00	2.62
ESRD	6.83	0.09	0.66	5.18	0.13	10.93	2.02	1.70
Hospital Type								
Rural	9.05	0.14	1.72	12.94	1.00	7.58	5.67	2.94
Urban	8.99	0.22	1.22	11.93	0.98	6.57	7.49	3.26
<= 50	7.53	0.06	1.62	12.03	0.71	6.38	4.66	2.44
51-100	9.36	0.13	1.57	13.19	0.88	7.44	6.86	2.79
101-250	9.50	0.22	1.42	12.49	1.06	6.82	7.27	3.45
251-350	10.08	0.25	1.24	11.78	1.10	7.54	7.84	3.31
351-500	8.59	0.26	1.12	11.95	1.04	6.38	6.90	3.38
> 500	7.05	0.24	0.97	10.91	0.97	6.35	7.76	3.07
Teaching	7.69	0.22	0.97	10.54	0.93	5.62	6.47	3.44
Nonteaching	10.06	0.18	1.67	13.57	1.04	7.86	7.34	2.45

Source: Urban Institute analysis of merged 1987 HCFA HOP and BMAD files.

Table 13

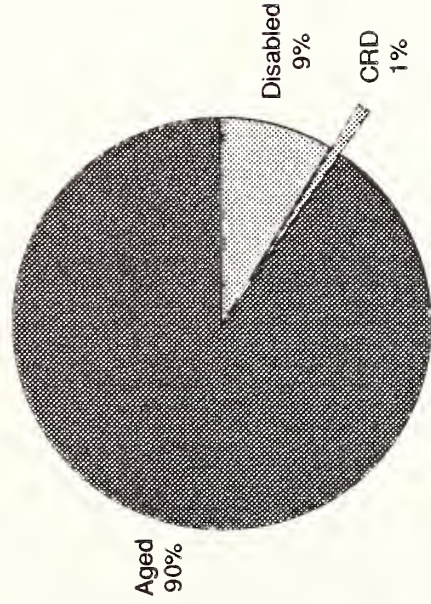
Percentage of Emergency Room Visits with Selected High Volume Tests
by Beneficiary Type and Hospital Type, 1987

	36415 Routine Venipuncture	70450 CAT Scan Head	71010 One View X-Ray	71020 Two View X-Ray	76091 Mammo- graphy	81000 Routine Urinalysis	93000 Routine ECG	93010 Routine ECG
Total	0.46%	0.77%	9.87%	14.34%	0.07%	0.40%	1.31%	19.77%
Beneficiary Type								
Aged	0.49	0.83	10.66	14.94	0.08	0.41	1.40	21.32
Disabled	0.31	0.47	5.44	11.28	0.04	0.36	0.84	11.92
ESRD	0.49	1.17	16.55	16.27	0.05	0.41	1.79	23.48
Hospital Type								
Rural	.32	.65	9.67	13.97	.07	.40	.73	17.47
Urban	.50	.81	9.82	14.45	.07	.40	1.50	20.53
<= 50	0.36	0.52	8.99	11.99	0.05	0.40	1.02	13.85
51-100	0.37	0.62	10.05	13.31	0.05	0.35	0.97	17.40
101-250	0.47	0.71	10.50	14.34	0.05	0.41	1.43	20.95
251-350	0.51	0.87	9.46	15.37	0.10	0.41	1.80	20.81
351-500	0.44	0.84	8.74	14.77	0.12	0.39	0.82	20.45
> 500	0.57	1.28	8.90	15.47	0.10	0.41	1.07	20.13
Teaching	0.50	0.34	8.95	16.44	0.13	0.38	1.33	19.80
Nonteaching	0.43	0.72	10.30	14.26	0.04	0.41	1.27	19.67

Source: Urban Institute analysis of merged 1987 HCFA HOP and BMAD files.

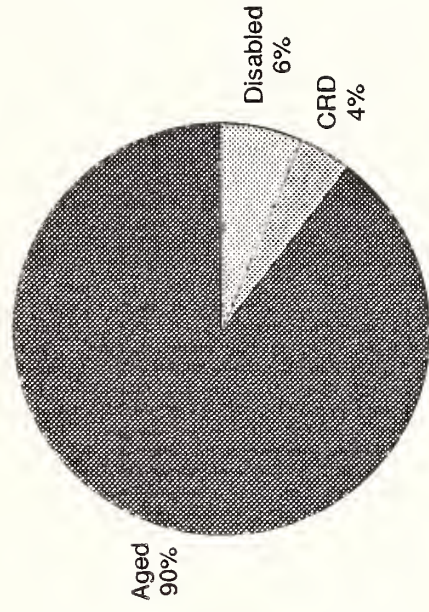
Figure 1:
Beneficiaries and Charges
by Medicare Status

Beneficiaries



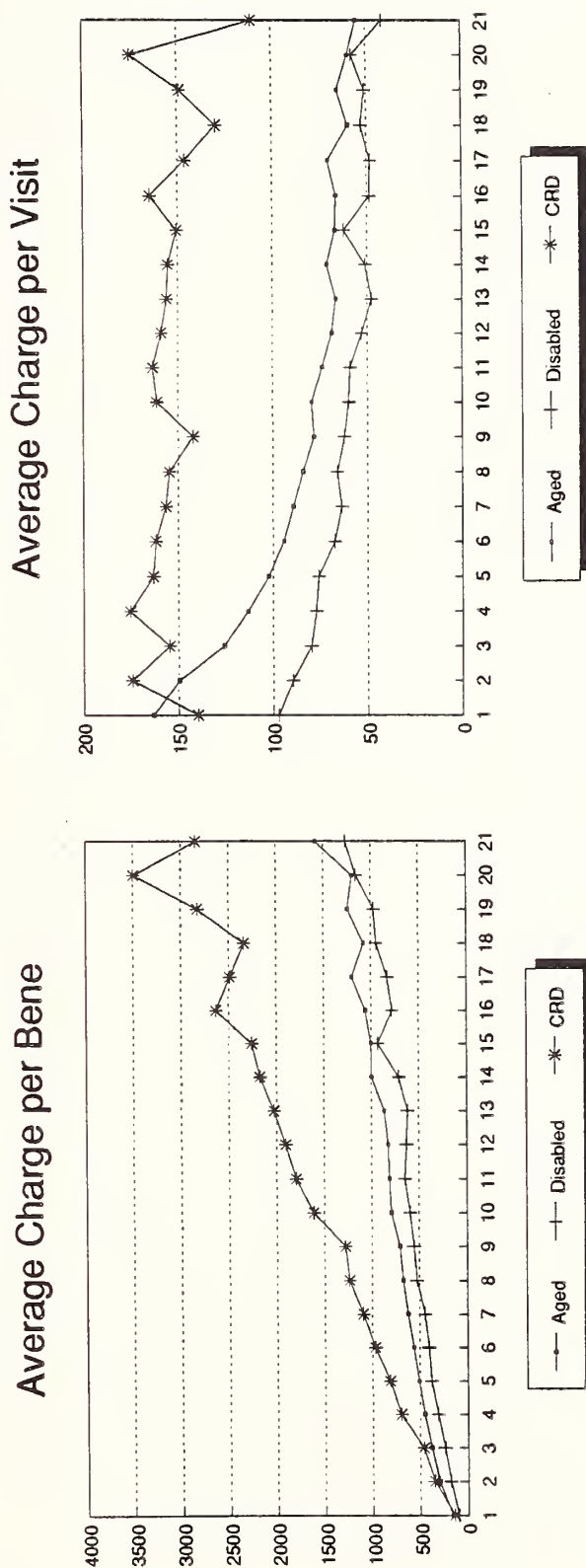
Total Beneficiaries: 544,819

Allowed Charges



Allowed Charges: \$151,588 (Thousands)

Figure 2: Average Charge per Beneficiary and Visit



	Aged	Disabled	CRD
Avg Chrg per Bene:	\$276.04	\$203.22	\$1120.41
Avg Chrg per Visit:	\$276.04	\$76.17	\$153.16

Figure 3: Average Number of Providers per Beneficiary and Visit

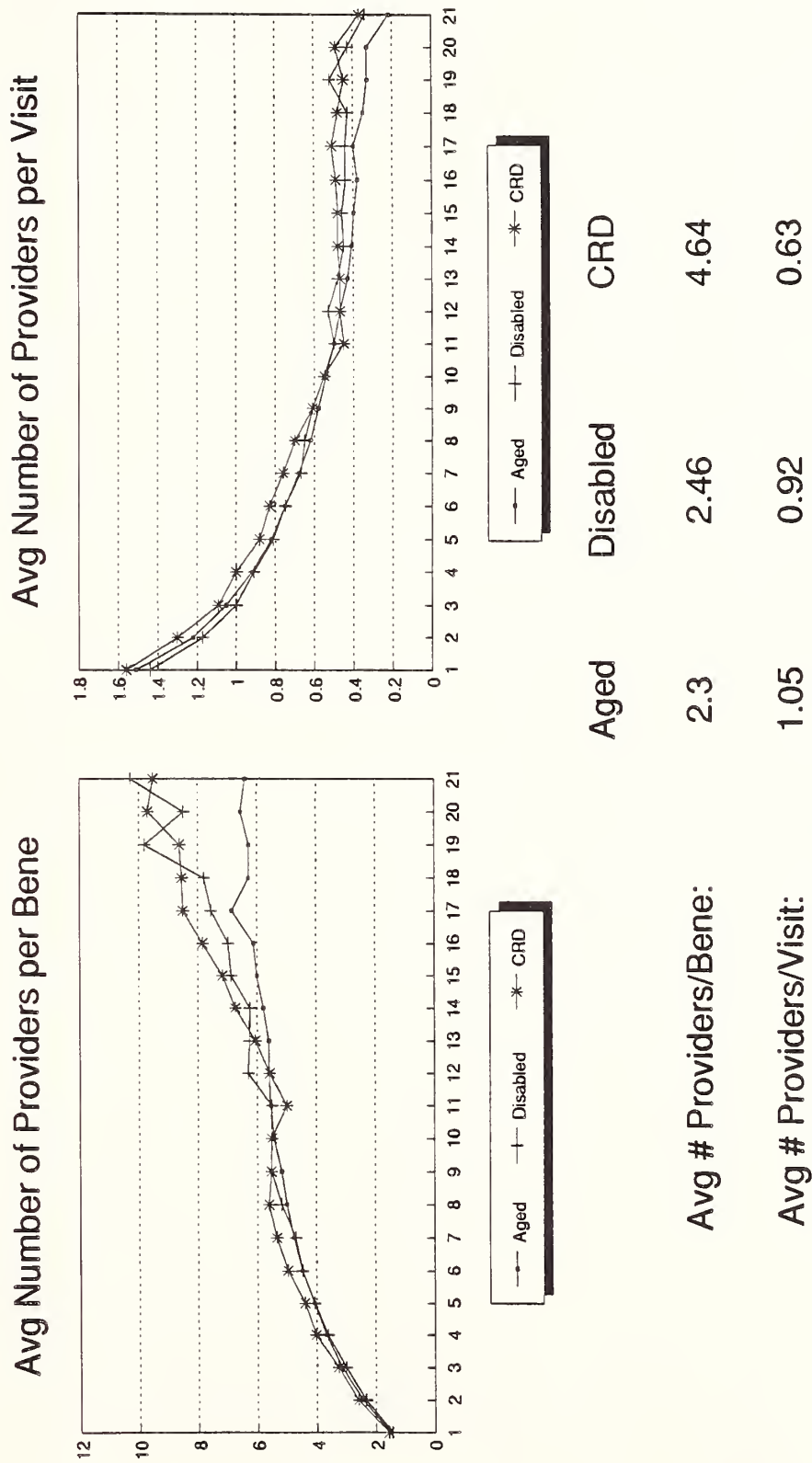
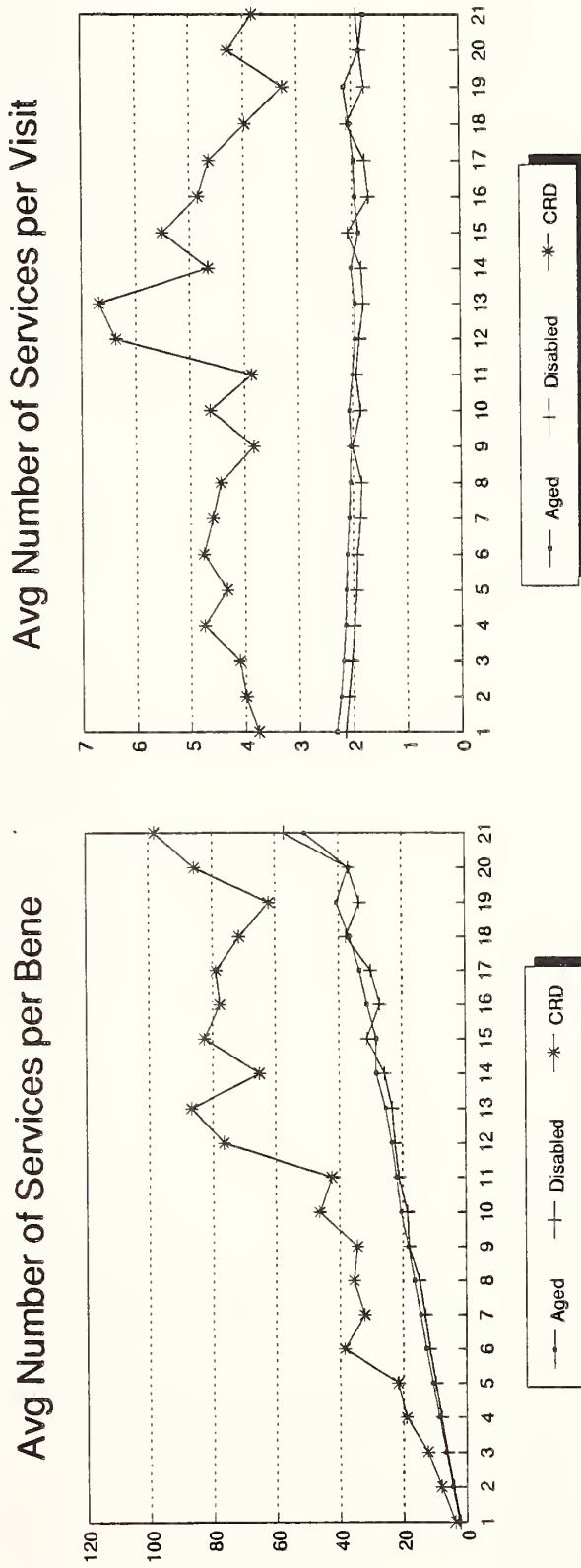


Figure 4: Average Number of Services per Beneficiary and Visit



	Aged	Disabled	CRD
Avg # Serv/Bene:	4.78	5.33	34.05
Avg # Serv/Visit	2.19	2.00	4.66

Table 10

Distribution of Physician Services and Charges, by HCPCS Code
for Selected Emergency Room HOPD Visits, 1987

90505 Emergency Room Visit New Patient Brief Service

HCPCS Code & Description	Units of Service	Percent of Service Units	Allowed Charge	Percent of Allowed Charge	Average Allowed Charge
12001 SIMPLE REPAIR OF SUPERFICIAL WOUNDS	88	0.32%	\$2,973	0.54%	\$33.78
12002 SIMPLE REPAIR OF SUPERFICIAL WOUNDS	66	0.24	3,153	0.57	47.77
25605 TREATMENT OF CLOSED DISTAL RADIAL FRACTURE	20	0.07	5,445	0.98	272.25
25610 TREATMENT OF CLOSED, COMPLEX, DISTAL RADIAL FRACTURE	10	0.04	2,870	0.52	287.00
27236 OPEN TREATMENT OF CLOSED OR OPEN FEMORAL FRACTURE	5	0.02	2,882	0.52	576.40
51595 CYSTECTOMY, COMPLETE, WITH URETEROILEAL CONDUIT OR SIGMOID BLADDER	1	0.00	2,800	0.51	2,800.00
66984 EXTRACAPSULAR CATARACT REMOVAL WITH INSERTION OF INTRAOCULAR LENS (ONE STAGE PROCEDURE)	4	0.01	3,620	0.65	905.00
71010 RADIOLOGIC EXAMINATION, CHEST SINGLE VIEW	410	1.50	4,174	0.75	10.18
71020 RADIOLOGIC EXAMINATION, CHEST, TWO VIEWS	842	3.08	11,669	2.11	13.86
90220 INITIAL HOSPITAL CARE COMPREHENSIVE HISTORY AND EXAMINATION	135	0.49	8,893	1.61	65.87
90505 EMERGENCY DEPARTMENT SERVICE, NEW PATIENT BRIEF SERVICE	19,027	69.51	334,166	60.83	17.56
93010 ELECTROCARDIOGRAM, ROUTINE, INTERPRETATION AND REPORT ONLY	964	3.52	9,471	1.71	9.82
OTHER	5,800	21.19	161,289	29.14	27.81
Total	27,372	100.00%	\$553,405	100.00%	\$20.22

90510 Emergency Room Visit New Patient Limited Service

HCPCS Code & Description	Units of Service	Percent of Service Units	Allowed Charge	Percent of Allowed Charge	Average Allowed Charge
25605 TREATMENT OF CLOSED DISTAL RADIAL FRACTURE	59	0.09%	\$15,959	1.06%	\$270.49
25610 TREATMENT OF CLOSED, COMPLEX, DISTAL RADIAL FRACTURE	28	0.04	9,128	0.61	326.00
66984 EXTRACAPSULAR CATARACT REMOVAL WITH INSERTION OF INTRAOCULAR LENS (ONE STAGE PROCEDURE)	8	0.01	10,515	0.70	1,314.38
71010 RADIOLOGIC EXAMINATION, CHEST SINGLE VIEW	1,292	1.96	13,809	0.92	10.69
71020 RADIOLOGIC EXAMINATION, CHEST, TWO VIEWS	2,806	4.26	39,292	2.62	14.00
72110 RADIOLOGIC EXAMINATION, SPINE, LUMBOSACRAL COMPLETE, WITH OBLIQUE VIEWS	596	0.90	12,369	0.83	20.75
73030 RADIOLOGIC EXAMINATION, SHOULDER COMPLETE, MINIMUM OF TWO VIEWS	547	0.83	7,608	0.51	13.91
73510 RADIOLOGIC EXAMINATION, HIP COMPLETE, MINIMUM OF TWO VIEWS	547	0.83	8,718	0.58	15.94
74020 RADIOLOGIC EXAMINATION, ABDOMEN COMPLETE	478	0.73	8,266	0.55	17.29
90220 INITIAL HOSPITAL CARE COMPREHENSIVE HISTORY AND EXAMINATION	258	0.39	17,542	1.17	67.99
90510 EMERGENCY DEPARTMENT SERVICE, NEW PATIENT LIMITED SERVICE	40,748	61.84	934,618	62.36	22.94
93010 ELECTROCARDIOGRAM, ROUTINE, INTERPRETATION AND REPORT ONLY	2,982	4.53	30,024	2.00	10.07
OTHER	15,544	23.59	390,849	26.08	25.14
Total	65,893	100.00%	\$1,498,697	100.00%	\$22.47

90515 Emergency Room Visit New Patient Intermediate Service

HCPCS Code & Description	Units of Service	Percent of Service Units	Allowed Charge	Percent of Allowed Charge	Average Allowed Charge
25605 TREATMENT OF CLOSED DISTAL RADIAL FRACTURE	46	0.07%	\$12,835	0.67%	\$279.02
70450 COMPUTERIZED AXIAL TOMOGRAPHY, HEAD OR BRAIN WITHOUT CONTRAST MATERIAL	178	0.26	14,637	0.77	82.23
71010 RADIOLOGIC EXAMINATION, CHEST SINGLE VIEW	2,352	3.40	25,854	1.35	10.99
71020 RADIOLOGIC EXAMINATION, CHEST, TWO VIEWS	4,165	6.03	58,815	3.08	14.12
72110 RADIOLOGIC EXAMINATION, SPINE, LUMBOSACRAL COMPLETE, WITH OBLIQUE VIEWS	609	0.88	15,347	0.80	25.20
73510 RADIOLOGIC EXAMINATION, HIP COMPLETE, MINIMUM OF TWO VIEWS	650	0.94	10,710	0.56	16.48
74020 RADIOLOGIC EXAMINATION, ABDOMEN COMPLETE	902	1.31	16,194	0.85	17.95
90220 INITIAL HOSPITAL CARE COMPREHENSIVE HISTORY AND EXAMINATION	454	0.66	31,625	1.66	69.66
90515 EMERGENCY DEPARTMENT SERVICE, NEW PATIENT INTERMEDIATE SERVICE	37,328	54.04	1,168,296	61.22	31.30
90620 INITIAL CONSULTATION COMPREHENSIVE	131	0.19	11,099	0.58	84.73
93010 ELECTROCARDIOGRAM, ROUTINE, INTERPRETATION AND REPORT ONLY	5,222	7.56	55,800	2.92	10.69
OTHER	17,040	24.67	487,064	25.52	28.58
Total	69,077	100.00%	\$1,908,276	100.00%	\$27.63

Source: Urban Institute analysis of merged 1987 HCFA HOP and BMAD files.

Table 9

Distribution of Physician Services and Charges by HCPCS Code
for Selected HOPD Medical Visits, 1987

90040 Medical Visit Established Patient Brief Service

HCPCS Code & Description	Units of Service	Percent of Service Units	Allowed Charge	Percent of Allowed Charge	Average Allowed Charge
66821 DISCUSSION OF SECONDARY MEMBRANEOUS CATARACT ('AFTER CATARACT') AND/OR ANTERIOR HYALOID	10	0.02%	\$4,333	0.60%	\$433.30
66984 EXTRACAPSULAR CATARACT REMOVAL WITH INSERTION OF INTRAOCULAR PROSTHESIS (ONE STAGE PROCEDURE)	4	0.01	5,322	0.73	\$1,330.50
70470 COMPUTERIZED AXIAL TOMOGRAPHY, HEAD OR BRAIN WITHOUT CONTRAST MATERIAL	40	0.10	4,411	0.61	110.28
71020 RADIOLOGIC EXAMINATION, CHEST, TWO VIEWS	1,239	2.98	18,992	2.61	15.33
90040 OFFICE MEDICAL SERVICE, ESTABLISHED PATIENT BRIEF SERVICE	30,271	72.86	465,278	63.92	15.37
90050 OFFICE MEDICAL SERVICE, ESTABLISHED PATIENT LIMITED SERVICE	236	0.57	4,134	0.57	17.52
90060 OFFICE MEDICAL SERVICE, ESTABLISHED PATIENT INTERMEDIATE SERVICE	241	0.58	8,702	1.20	36.11
93000 ELECTROCARDIOGRAM, ROUTINE, WITH INTERPRETATION AND REPORT	302	0.73	8,658	1.19	28.67
93010 ELECTROCARDIOGRAM, ROUTINE, INTERPRETATION AND REPORT ONLY	322	0.78	3,893	0.53	12.09
OTHER	8,883	21.38	204,173	28.05	22.98
Total	41,548	100.00%	\$727,896	100.00%	\$17.52

90050 Medical Visit Established Patient Limited Service

HCPCS Code & Description	Units of Service	Percent of Service Units	Allowed Charge	Percent of Allowed Charge	Average Allowed Charge
65855 TRABECULOPLASTY BY LASER SURGERY, ONE OR MORE SESSIONS	16	0.01%	\$11,500	0.51%	\$718.75
66984 EXTRACAPSULAR CATARACT REMOVAL WITH INSERTION OF INTRAOCULAR LENS (ONE STAGE PROCEDURE)	10	0.01	\$12,286	0.54	1,228.60
71020 RADIOLOGIC EXAMINATION, CHEST, TWO VIEWS	3,975	3.35	64,805	2.86	16.30
90050 OFFICE MEDICAL SERVICE, ESTABLISHED PATIENT LIMITED SERVICE	83,703	70.55	1,518,135	66.92	18.14
90060 OFFICE MEDICAL SERVICE, ESTABLISHED PATIENT INTERMEDIATE SERVICE	516	0.43	12,243	0.54	23.73
93000 ELECTROCARDIOGRAM, ROUTINE, WITH INTERPRETATION AND REPORT	1,511	1.27	46,237	2.04	30.60
OTHER	28,908	24.37	603,252	26.59	20.87
Total	118,639	100.00%	\$2,268,458	100.00%	\$19.12

90060 Medical Visit Established Patient Intermediate Service

HCPCS Code & Description	Units of Service	Percent of Service Units	Allowed Charge	Percent of Allowed Charge	Average Allowed Charge
66984 EXTRACAPSULAR CATARACT REMOVAL WITH INSERTION OF INTRAOCULAR LENS (ONE STAGE PROCEDURE)	21	0.02%	\$22,077	0.80%	\$1,051.29
71020 RADIOLOGIC EXAMINATION, CHEST, TWO VIEWS	3,907	3.20	68,118	2.46	17.43
90060 OFFICE MEDICAL SERVICE, ESTABLISHED PATIENT INTERMEDIATE SERVICE	83,330	68.20	1,922,241	69.32	23.07
93000 ELECTROCARDIOGRAM, ROUTINE, WITH INTERPRETATION AND REPORT	2,870	2.35	73,166	2.64	25.49
OTHER	32,056	26.24	687,364	24.79	21.44
Total	122,184	100.00%	\$2,772,966	100.00%	\$22.70

Source: Urban Institute analysis of merged 1987 HCFA HOP and BMAD files.

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